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Volume IX, No. 1 March 1956

# CRISIS IN SCHOOL FINANCE

## Part I

## Rising School Needs

ROGER A. FREEMAN *

THE financial needs of education have been attracting growing public attention and causing mounting concern in recent years. Two factors are mainly responsible for the surging monetary requirements of the schools: years of war and material shortages have left us with a sorely inadequate school plant; enrollments have been rising rapidly and will keep growing at an unprecedented pace. Communities from all over the nation report overcrowded classrooms and shortages of qualified teachers. The picture of underhoused and understaffed school systems was strikingly dramatized during 1955 at state and regional conferences which culminated in the White House Conference on Education.

All students of the situation agree that financial support of the schools must be sharply raised, that the economy can well sustain such an increase, and that the American people, if given the facts, will be willing to foot the bill. Some feel that greater funds are the paramount need at this time and that nonmonetary problems could be solved without much difficulty if sufficient funds were provided. Others believe that it will be necessary also to loosen hardened concepts on the use of scarce manpower and facilities and to overcome resistance to improvements in organization and methods. The question thus is not whether more money must be raised for school purposes but how this can best be done and whether major changes are called for in our fiscal structure and in our school systems.

For many years education has been the second-largest item of public expenditure in the United States, exceeded only by national defense. The cost of education (higher and lower) accounts for about one-third of all state and local government expenditures and is about twice as great as the outlay for the next-largest public function, highways.

Editor's note: The second part of Mr. Freeman's study dealing with the financing of school requirements will be published in June.

* The author is assistant to the Governor of the State of Washington. In 1954-55 he served as Director of Research for the Education Committee of the U. S. Commission on Intergovernmental Relations (Kestnbaum Commission), later in 1955 as consultant on school finance to the Committee for the White House Conference on Education (McElroy Committee). Opinions expressed are those of the author and do not necessarily reflect the views of any of the offices with which he is or was connected.

Between 1940 and 1954 expenditures for education grew 300 per cent while tax revenues of state and local governments increased only 183 per cent (Table 1).

TABLE 1

Expenditures for Education and Tax Revenues of State and Local Governments, 1940 and 1954

| Fiscal Year | Tax Collections (millions of dollars) | Expenditures for Education (millions of dollars) |
|---|---|---|
| 1940 | $ 7,810 | $ 2,638 |
| 1954 | 22,067 | 10,557 |
| Increase in per cent | 183% | 300% |

Source: U. S. Bureau of the Census: *Historical Statistics on State and Local Government Finances, 1902-1953;* also: *Summary of Governmental Finances in 1954.*

Particularly in recent years, school costs have risen faster than other state and local expenditures: (Table 2)

TABLE 2

State and Local Government Expenditures 1950 and 1954

| Fiscal Year | For Elementary and Secondary Schools (millions of dollars) | For All Other Purposes (millions of dollars) |
|---|---|---|
| 1950 | $ 5,816 | $16,971 |
| 1954 | 8,896 | 21,805 |
| Increase | 53% | 28% |

Source: See Table 1.

With the cost of public welfare more or less stabilized, and highways largely financed from user taxes, the needs of education have tended to become the major determinant in state fiscal policy.

The following comment of the Pennsylvania Tax Study Committee applies to many states, and may soon apply to most: "An examination of the upward trend in educational costs reveals that the state tax problem is largely a problem of finding money to finance public instruction. If substantial new taxes are needed, it is to a considerable extent the result of the rising costs of education." [1]

Thirty one of the 47 state legislatures which met in 1955 raised tax rates or enacted new taxes. Over 2,600 new tax laws were enacted, the biggest crop of tax legislation and, in total, the heaviest state tax boost in many years. More tax increases are likely to follow within the next decade to provide for the support of the schools.

For almost a century the question of federal participation in the general school support—for operations, for construction, or for both—has been a highly controversial issue. Many groups feel that state and local action will need to be supplemented by federal assistance. Several executive recommendations and hundreds of bills have been before Congress. So far, none of them has been enacted.

*Enrollments*

The growth of school enrollment in the twentieth century falls into three distinct periods: Between 1900 and 1930 the number of public school pupils increased by 10 million. During the succeeding 20 years enrollment declined slightly. Then the war and postwar bumper crop of babies began reaching school-age; between Fall 1949 and Fall 1955 public school enrollment jumped almost 7 million; it is projected to grow another 10 million by 1965 (Table 3).

A growing segment of our youth is attending nonpublic schools. Between 1939 and 1955 public school enrollment increased 26 per cent, nonpublic school

[1] Commonwealth of Pennsylvania: *The Tax Problem,* Report of the Tax Study Committee, May 1953, p. 19.

enrollment 71 per cent; nonpublic schools absorbed 22 per cent of the enrollment increase during those 16 years. This somewhat eased the burden on public schools. The school tax load would now be 14 per cent or about $1½ billion a year greater if 4½ million children were not receiving their education in nonpublic schools[2] (Table 4).

If current cost levels were maintained for the next ten years, the addition of 10 million pupils would raise operating expenses $2½ billion. In the past six years current outlay has risen at an average of $400 million annually. A continuation of this trend would raise expenditures within the next ten years by much more than the needed $2½ billion (Table 5).

School facilities to house 10 million new pupils by 1965 will cost upward of $10 billion. With a present annual building rate of over $2.7 billion, this goal seems not unreasonable to accomplish. A continuation of this building rate would boost annual requirements for debt retirement and interest by $1 billion to $1½ billion a year. The total annual requirement for current outlays

TABLE 3

School-age Population, Public School Enrollment and Teaching Staff

| School Year | Population 5 to 17 (000) | Public School Enrollment (000) | Average Daily Attendance in Public Schools (000) | Instructional Staff in Public Schools (excludes supervisors, principals, etc.) (000) | Ratio Between Teachers and Pupils Enrolled |
|---|---|---|---|---|---|
| 1899-1900 | 21,404 | 15,503 | 10,633 | 423 | 1:36.7 |
| 1929-1930 | 31,417 | 25,678 | 21,265 | 854 | 1:30.1 |
| 1949-1950 | 30,204 | 25,111 | 22,284 | 914 | 1:27.5 |
| 1955-1956 | 37,334 | 32,026* | | 1,139 | 1:26.8** |
| 1965-1966 (proj.) | 48,503 | 42,000[E] | | | |

* U. S. Office of Education, *Release September 8, 1955.* A U. S. Office of Education release of November 30, 1955 seems to indicate that this estimate may have been 304,000 pupils high.

** U. S. Office of Education, *Release November 30, 1955.*

E—Estimate.

Source: Population: U. S. Bureau of the Census, *Current Population Reports,* Series P-25, Nos. 98, 114, 123.

Enrollment, Attendance and Teachers: U. S. Office of Education: *Statistics of State School Systems 1951-52;* and: *Release September 8, 1955.*

TABLE 4

Enrollment Increase in Public and Nonpublic Elementary and Secondary Schools 1939-40 to 1955-56.

| School Year | Public Schools (000) | Nonpublic Schools (000) | Nonpublic school Enrollment in per cent of public school enrollment |
|---|---|---|---|
| 1939-1940 | 25,434 | 2,611 | 10.3% |
| 1955-1956 | 32,026 | 4,470 | 14.0 |
| Increase | 25.9% | 71.2% | |

Source: 1939-40: U. S. Office of Education, *Statistics of State School Systems 1939-40;* 1955-56: U. S. Office of Education, *Release of September 8, 1955.*

[2] This vast expansion presents the nonpublic schools with extraordinary financing problems. However, this article only deals with the financing of the tax-supported schools.

and debt service would thus be \$3½ billion to \$4 billion a year larger by 1965.

However, it may be questioned whether future school requirements can be projected at current cost levels.[3] In the past, school revenues and expenditures have risen consistently faster than enrollment and prices. This happened between 1900 and 1955:

| | |
|---|---|
| school-age population increased ...... | 74% |
| enrollment in public schools increased | 107% |
| current expenditures of public schools increased .......................... | \$1095 |
| (in dollars of constant value) | |

We are now spending 6 times as much a year per pupil in constant dollars as we did in 1900. Whether this trend of steadily increasing costs will continue at the same rate or at faster or slower pace is hard to predict.

There has been a long-range trend of allocating a growing share of the national income to education. Expenditures for public education at the turn of the twentieth century equalled about 1½ per cent of the national income; currently they approximate 3.7 per cent (Table 6). During the depression, school expenditures declined less than income; during the war income rose faster than school costs. Thus the percentage of the national income going to schools rose sharply during the depression, dropped during the war.

TABLE 5

Public School Expenditures 1899-1900 to 1955-56

| School Year | In Actual Dollars: Current Expenses | Capital Outlays | Total | In 1955 Dollars: Current Expenses | Capital Outlays | Total | Average Current Expense Per Pupil Enrolled |
|---|---|---|---|---|---|---|---|
| | (millions of dollars) | | | | | | |
| 1899-1900 | \$ 180 | \$ 35 | \$ 215 | \$ 619 | \$ 122 | \$ 741 | \$ 40 |
| 1929-1930 | 1,946 | 371 | 2,317 | 3,077 | 587 | 3,664 | 120 |
| 1949-1950 | 4,824 | 1,014 | 5,838 | 5,399 | 1,135 | 6,534 | 215 |
| 1955-1956 | 7,812 | 2,777 | 10,589 | 7,812 | 2,777 | 10,589 | 244 |

Source: 1899-1900; 1929-1930; 1949-1950: U. S. Office of Education: *Statistics of State School Systems 1951-52.*

1955-1956: National Education Association: *Advance Estimates of Elementary and Secondary Public Schools for the School Year 1955-56.*

Consumers Price Index: Bureau of Labor Statistics and Federal Reserve Bank of New York.

In considering the trend of the national income share going to education it must be remembered that war-connected purposes which required about 2 per cent of the national income around 1900 and 4 per cent in 1940, took 40 per cent in 1944, and have in recent years absorbed between 18 per cent and 20 per cent. This prior claim on the output of goods and services and the concomitant tax burden inevitably depress our ability to support more liberally other public services, including education, or to spend more freely for private consumption. The last column in Table 6 shows school expenditures in per cent of the national income after deducting from that income public ex-

[3] To bring the current expenditures of all states which now spend less than the national average per pupil up to that average would cost \$877 million a year. To raise all states which spend less than 90 per cent of the national average up to 90 per cent of that average would cost \$553 million a year.

penditures for war-connected purposes; it probably yields a more valid comparison between the prewar period and war and postwar years.

TABLE 6

STATE AND LOCAL GOVERNMENT EXPENDITURES FOR EDUCATION 1902 TO 1955

| Year | Expenditures for Elementary and Secondary Schools (in millions of dollars) | Expenditures for all Education (in millions of dollars) | Expenditures for Education: in per cent of the national income | Expenditures for Education: in per cent of the national income less war-connected expenditures |
|---|---|---|---|---|
| 1902 | $ 238 | $ 255 | 1.55% | 1.57% |
| 1913 | 522 | 577 | 1.70 | 1.73 |
| 1922 | 1,541 | 1,705 | 3.07 | 3.19 |
| 1927 | 2,017 | 2,235 | 2.93 | 3.00 |
| 1932 | 2,025 | 2,311 | 4.52 | 4.73 |
| 1934 | 1,605 | 1,831 | 4.11 | 4.33 |
| 1940 | 2,259 | 2,638 | 3.42 | 3.55 |
| 1944 | 2,305 | 2,793 | 1.58 | 2.87 |
| 1948 | 4,292 | 5,379 | 2.57 | 2.97 |
| 1950 | 5,816 | 7,177 | 3.15 | 3.62 |
| 1952 | 6,816 | 8,318 | 2.93 | 3.67 |
| 1954 | 8,896 | 10,557 | 3.49 | 4.33 |
| 1955 | 9,666 | 11,400 | 3.67 | 4.42 |

Source: Expenditures 1902-1954: U. S. Bureau of the Census: *Historical Statistics of State and Local Government Finances 1902-1953,* and *Summary of Governmental Finances in 1954.*

1955: Public Schools: National Education Association: *Advance Estimates of Elementary and Secondary Public Schools for the School Year 1955-56.*

All education: Estimate of author.

National income 1902-1927: derived from statistics of the National Industrial Conference Board: *The Economic Almanac* 1953-54.

Definition of war-connected expenditures: military establishment, veterans benefits, interest on federal debt incurred for defense purposes, foreign aid, development of atomic energy.

The long-range trend of devoting more of our income to education shows an increasing recognition by the American people of the value of education which is certain to continue and likely to grow in the years ahead.

The national income is on the upgrade. The staff of the Joint Economic Committee in 1954 estimated the gross national product to rise 47 per cent between 1953 and 1965.[4] Since public school enrollment is projected to rise only 37 per cent during that period it should be possible to provide the necessary funds for the schools without too much difficulty—if present cost levels were continued.

Table 5 shows that school expenditure standards have consistently tended upward. Increased funds have enabled the schools to make progress in upgrading, expanding, and enriching their programs, in broadening their offerings, and in adjusting them to current needs, demands, and standards of living. Pupil-teacher ratios were reduced, dozens of new subjects were added to the curriculum, particularly in the field of so-called "life-adjustment"; many tasks which used to be in the realm of the home were assumed by the schools. The public has come to expect the steady widening of the school program as a matter of course.[5] It has accepted—if sometimes reluctantly—the inevitable growth in school costs. The question is now whether funds can be secured to continue the rate of progress—or even to step it up—during this period of unprecedented enrollment expansion. This leads to other questions: how serious are the deficiencies which now plague the schools in many areas? How urgent is

[4] *Potential Economic Growth of the United States During the Next Decade.* Materials prepared for the Joint Committee on the Economic Report by the Committee Staff, 1954. This estimate agrees substantially with estimates prepared by the Department of Commerce, the National Planning Association and the President's Materials Policy Commission.

[5] There is, however, a lively controversy going on whether the schools have taken on too much and are neglecting basic educational programs.

it that they be remedied?

Deficiencies exist largely in two fields: teachers and buildings.

*Teacher Shortages*

The National Education Association reported that, in the Fall of 1955, 80,805 emergency teachers were teaching in the public schools and that another 47,104 were needed to fill teacher requirements.[6] It estimated that half the emergency teachers would eventually qualify for full certificates and that half should be replaced.[7] This indicates a need for 87,512 qualified teachers.

The subcommittee on teacher need and supply of the Committtee for the White House Conference on Education estimated in the Fall of 1955 that 30,000 teachers were needed to relieve overcrowding and eliminate half-day sessions, 10,000 to add neglected subjects, 40,000 to replace unprepared teachers, or a total need of 80,000 qualified teachers.[8]

The U. S. Office of Education in a release dated September 8, 1955, estimated the shortage of qualified teacher supply at 141,300. The details of that estimate and subsequently released information well illustrate the difficulty of specifying the size of the teacher shortage. The September 8th release showing teacher supply and demand for Fall 1955 is reported in the next column.

A U. S. Office of Education Release dated November 30, 1955, (Circular # 467) revealed that between Fall 1954 and Fall 1955 the number of certificated teachers in the public schools had increased 86,664 rather than the projected 5,100. Enrollment in the public schools which had been estimated to rise

| | |
|---|---|
| New supply of qualified teachers .. | 63,400 |
| 1954-55 emergency teachers qualifying in 1955-56 ........ | 25,000 |
| | 88,400 |
| Turnover (teachers leaving) ........ | 83,300 |
| Net gain in number of qualified teachers 1954-55 to 1955-56 ...... | 5,100 |
| Emergency teachers in 1954-55 (to be replaced) ........ | 91,200 |
| Teachers needed to meet enrollment increase ........ | 55,200 |
| Shortage of qualified supply ..... | 141,300 |

1,300,000 had gone up only 1,048,172.[9] Assuming a teacher-pupil ratio of 1:30 in elementary grades and 1:25 in high schools, 36,641 teachers would be needed in public schools to meet increased enrollment. Adding teacher need in nonpublic schools at the same teacher-pupil ratio which the U. S. Office of Education used (1:33), 42,877 new teachers would be needed to serve increased enrollment in all schools, about 12,300 fewer than were indicated in the September 8th release. On this basis the total shortage of qualified teacher supply would be 47,413.[10]

It is apparent that we shall need more accurate statistical projections and uniform standards of teacher use and qualifications if we are to have reliable information on the extent of the teacher shortage. Tables 3, 7, and 8 show that the teacher-pupil ratio has consistently declined. Teacher qualifications have

[6] *Advance Estimates of Elementary and Secondary Public Schools for the School Year 1955-56.*

[7] Forty-two per cent of the holders of emergency certificates have four or more years of college preparation.

[8] *Suggested "Homework" for the participants in the White House Conference on Education*, p. 33.

[9] The National Education Association estimated the increase in enrollment at 1,272,811, the increase in teachers at 50,637. (*Advance Estimates of Elementary and Secondary Public Schools for the School Year 1955-56.*) It remains to be seen which of the varying estimates were correct—if any.

[10] Without considering supply changes in nonpublic schools.

just as consistently risen. In 1920 four-fifths of all teachers had less than two years of training beyond high school. In 1953 more than three-fourths of all teachers in elementary and secondary public schools had four years or more of college preparation. A sample study of the National Education Association found that in 1949 49 per cent of the elementary school teachers (not including high schools) were college graduates, 34 per cent had completed at least two years of college training, and 17 per cent had less training. In 1955 it was found that 68 per cent of elementary school teachers were college graduates, 26 per cent had completed two or more years of college, and only 6 per cent had less formal training to their credit.[11]

The conclusions to be drawn from these data are: teacher shortages are due largely to a desire to further lower teacher-pupil ratios, and to further raise teacher qualifications. Some eminent authorities in the public school field feel that both actions are more than desirable, that they are necessary. Opinions, however, are far from being unanimous.

National data have a tendency of hiding serious local shortcomings. A recent sample study showed 27 per cent of elementary school classes in excess of 35 pupils, and 6 per cent in excess of 40 pupils. Such conditions exist largely because of inefficient use and poor distribution of teachers, and increases in program courses. A study of the National Education Association showed that, in 1950-51, 16 states had a teacher-pupil ratio of less than 1.22[12] (Table 7). Some of these states do not have low-density population. But they fail to make efficient use of the teachers they have. On the other hand, we find examples of states like Utah with low population density which combine high teacher-pupil ratios with high educational achievements.

TABLE 7

SCHOOL-AGE POPULATION AND SCHOOL EMPLOYEES, 1940-1954

| Year | Civilian Population 5-20 (000's) | State and Local School Employees (000's) | Ratio |
|---|---|---|---|
| 1940 | 36,966 | 1,320 | 1:28.0 |
| 1942 | 35,814 | 1,320 | 1:27.1 |
| 1944 | 33,263 | 1,311 | 1:25.4 |
| 1946 | 34,085 | 1,457 | 1:23.4 |
| 1948 | 35,936 | 1,581 | 1:22.7 |
| 1950 | 36,947 | 1,723 | 1:21.4 |
| 1952 | 38,599 | 1,873 | 1:20.6 |
| 1954 | 41,542 | 2,050 | 1:20.3 |

Source: Employees: U. S. Bureau of the Census: *State Distribution of Public Employment in 1954.*

Population: U. S. Bureau of the Census: *Current Population Reports,* Series P-25, Nos. 98 and 121.

While demand has been rising, the supply of potential teacher candidates has tightened in recent years: between 1950 and 1955 the number of civilian persons between 18 and 24 declined 2.1 million (from 15.2 million in 1950 to 13.1 million in 1955). This is the result of low birth rates in the 1930's and of expansion of the Armed Forces. During the same time the number of school-age children (5-17) increased 6.6 million[13] (Table 8). The lowering of the average marriage age, the present high birth rate, and the growing custom of having more children per family have kept many women from entering, con-

[11] National Education Association: *The 1955 Teacher Supply and Demand Report.*

[12] National Education Association: *Educational Differences Among the States, March 1954.*

[13] U. S. Bureau of the Census: *Current Population Reports,* Series P-25, No. 121.

tinuing in, or re-entering the teaching profession.

Education has done relatively better than other professions or occupations in recent years in attracting candidates from a smaller supply. The freshman class in teacher training in 1954 was

TABLE 8

SCHOOL-AGE POPULATION AND LOCAL SCHOOL EMPLOYEES, 1946-1954

| Year | Civilian Population 5-17 (000's) | Local School Employees (000's) | Ratio |
|---|---|---|---|
| 1946 | 28,515 | 1,224 | 1:23.3 |
| 1948 | 29,594 | 1,295 | 1:22.9 |
| 1950 | 30,696 | 1,411 | 1:21.8 |
| 1952 | 33,138 | 1,537 | 1:21.6 |
| 1954 | 35,907 | 1,691* | 1:21.2 |

* This averages an annual increase of 4.75 per cent, somewhat less than might be expected under "Parkinson's Law." See: "Parkinson's Law," *The Economist*, (November 19, 1955), p. 635.

Note: Data for local school employees not available for years prior to 1946.

Source: See Table 7.

19.4 per cent larger than in 1953; in 1955 it showed another 13.2 per cent increase.[14] The number of degrees in education conferred by institutions of higher learning has been going up, the number of degrees in other fields has fallen off (Table 9).

The number of certificated teachers in the public schools increased 25 per cent in the past five years while the nation's working force rose only 4 per cent.

In 1950 certificated teachers accounted for 1.34 per cent of the civilian labor force. They equalled 8 per cent of the increase in the labor force between 1950 and 1955 (Table 10).

A survey of the National Education Association indicated a turnover of 105,000 teachers in the current year. About 21,000 left to go to other states where presumably a majority will continue in teaching. More than half of the 84,000 who drop out of teaching

TABLE 9

EARNED DEGREES CONFERRED BY HIGHER EDUCATIONAL INSTITUTIONS IN THE UNITED STATES, 1949-50 AND 1954-55

| | 1949-50 | 1954-55 | Increase or Decrease in Per Cent |
|---|---|---|---|
| Education ..... | 65,807 | 82,344 | +25.1% |
| All Other Fields | 432,779 | 272,101 | -37.1 |
| Total ....... | 498,586 | 354,445 | -28.9 |
| Degrees in selected fields: | | | |
| Engineering . | 57,159 | 27,672 | -51.6 |
| Business .... | 76,530 | 45,128 | -41.0 |
| Chemistry ... | 13,148 | 8,098 | -38.4 |
| Journalism .. | 5,255 | 2,520 | -52.0 |

Source: U. S. Office of Education: *Earned Degrees Conferred by Higher Educational Institutions, 1949-50; 1954-55.*

do so for reasons of marriage, family, disability, or old age Only 1.2 per cent of the 1.2 million public school teachers left to accept other types of employment.[15] The number of "returnees" is not known. In any case though, 1.2 per cent does not seem an unusually high rate of turnover.

Potential candidates for teaching careers who decide, for financial reasons, to take jobs in private industry or teachers who leave the profession for other pursuits, usually are men. They often can find better-paying jobs either in highly unionized manual trades or, if they command superior technical skills, in professional fields. Women have fewer possibilities of earning higher wages. Teaching is among the best-

[14] Raymond Walters: "Statistics of Attendance in American Universities and Colleges, 1955," *School and Society* (December 10, 1955).

[15] National Education Association: *Advance Estimates of Public Elementary and Secondary Schools for the School Year 1955-56.*

paid jobs a woman without high ability in one of a small number of specialized fields can find. Since differences in teachers' salary schedules between men and women have virtually disappeared, schools are in a poor competitive position for attracting and keeping men.

TABLE 10

CIVILIAN LABOR FORCE AND PUBLIC SCHOOL TEACHERS 1950 AND 1955

| | Civilian Labor Force | Instructional Staff in Public Schools* | Emergency Teachers | Certificated Instructional Staff |
|---|---|---|---|---|
| 1950 | 63,099,000 | 927,146 | 79,989 | 847,157 |
| 1955 | 65,847,000 | 1,138,275 | 80,815 | 1,057,460 |
| Increase | 4.2% | 22.8% | 1.0% | 24.8% |

* Excluding supervisors, principals, etc.

Source: Civilian labor force (monthly average): U. S. Department of Labor; Instructional staff: National Education Association: *Advance Estimates of Elementary and Secondary Public Schools for the School Year 1950-51; 1955-56.*

On the whole, teachers have done relatively better than other public employees or white collar workers in improving their earnings. Manual workers outpaced white collar groups in the quest for higher wages (Table 11).

Financial rewards for greater ability, competence, effort, or for acquiring more education have relatively declined in recent decades. The differential between higher and lower skills has shrunk and school teachers and other college graduates now often are paid less than truck drivers or auto and construction workers (Table 12).

A major deterrent to ambitious young people is the rigid single-salary schedule which does not permit reward for individual teachers' ability, efforts, or accomplishments, and limits their earnings potential. Education thus loses the more capable candidates. It encourages the most highly qualified persons to shift to occupations without rigid salary limitations. Teachers' organizations traditionally oppose suggestions for applying the merit principle to teachers' pay.

There is general agreement that teachers' salaries need to be raised, particularly in those states where they are presently low. Boosting teachers' salaries can help greatly in improving the teacher supply. But it is only part of the answer.

In a recent study "Teachers For Tomorrow" the *Fund for the Advancement of Education* found:

> If we match our needs against the prospective supply of well-qualified teachers, we can come to only one conclusion: *It will be impossible under the present pattern of teacher recruitment and teacher utilization to secure anywhere near enough good teachers for our schools and colleges over the next 15 years. . . .*
>
> *About one-fifth of all 1954 graduates of four-year colleges entered school teaching. But during the next ten years one-half of all college graduates of every variety would have to enter school teaching in order to fill our needs entirely from this major source, . . .*
>
> Nothing approaching this proportion of college graduates can be expected to enter teaching.

It is apparent that better methods of teacher utilization will need to be found. The New York Commissioner of Education, James E. Allen, Jr. explained the situation at his state's education conference on September 19, 1955:

> Almost every other profession has developed methods and practices which permit the successful practitioner to be of wider service. By employing assistants and utilizing modern labor saving de-

vices and professional aides, members of other professions have been able to extend the sphere of their service and influence and improve the quality of their work. In the teaching profession generally speaking, the opposite has been true. We have tended to limit rather than extend the services of good teachers . . . the situation makes it imperative that we think in terms of maximum efficiency in the use of the limited number of teachers available to us.

probably go up, current school expenditures are likely to expand at a faster rate than enrollment and the projected growth in national income. This means that the share of the national income going to education will need to keep on rising, probably at about the rate at which it has been going up in recent years.

*Building shortages*

Lack of adequate facilities and overcrowding of classrooms are widely held to be more critical than teacher shortages. During the depression, war, and early postwar years, school construction lagged behind and a building deficit amounting to several billion dollars piled up. More recently school construction has been rising at a rapid pace, establishing new all-time records in each of the past five years. But we are far from having caught up with the accumulated backlog. Some communities are making fast progress, but others are falling behind. The conditions under which boys and girls in some areas of the country attend school are shocking and unconscionable.

TABLE 11

Average Annual Earnings Per Full-Time Employee in Selected Industries, 1929 and 1953

| | 1929 | | 1953 | Per cent of Increase |
|---|---|---|---|---|
| | in actual dollars | in 1953 dollars | | |
| Finance, insurance, and real estate | $2,062 | $3,219 | $3,761 | 16.8% |
| State and local governments (non-school) | 1,549 | 2,418 | 3,245 | 34.2 |
| Federal Government (general) | 1,561 | 2,437 | 3,290 | 35.0 |
| Wholesale and retail trade | 1,594 | 2,488 | 3,476 | 39.7 |
| Public education | 1,445 | 2,256 | 3,315 | 46.9 |
| Services | 1,079 | 1,684 | 2,650 | 57.4 |
| Manufacturing | 1,543 | 2,409 | 4,051 | 68.2 |
| Mining | 1,526 | 2,382 | 4,364 | 83.2 |

Source: U. S. Department of Commerce: *National Income*, 1954, p. 200-201.

To summarize the teacher situation: It is improbable that the number of qualified teachers will or can increase at a faster rate than the number of pupils over the next ten years. The above-mentioned study of the Fund for the Advancement of Education suggests that the opposite may be true. Thus the solution to the teacher problem is only partly monetary. To a considerable degree it requires a search for and adoption of more efficient methods of teacher utilization. The longer the resistance to the necessary adjustments is continued, the more serious the situation in many areas may become.

Teachers' compensation accounts for 60 per cent to 65 per cent of current school costs. Since teachers' salaries will

Estimates of the existing classroom shortage often are based on the *Report of the Status Phase of the School Facili-*

*ties Survey* which the U. S. Office of Education compiled from state reports in 1953. That report indicated a national shortage of 312,000 classrooms at a cost of $10.6 billion; applicable state and local resources were found to total $5.9 billion leaving a net deficit of $4.7 billion.

The accuracy and reliability of the state reports have been seriously questioned. The Education Committee of of the National Citizens' Commission for the Public Schools[17] estimated that not less than 950,000 new classrooms should be built prior to 1965.

The Subcommittee "What Are Our School Building Needs?" of the Committee for the White House Conference on Education after reviewing the various surveys and estimates omitted a specific reference to the extent of the school building shortage from its report.

TABLE 12

Wage or Salary Income by Major Occupation Groups, 1939 and 1954

| | 1939 | | | |
|---|---|---|---|---|
| | in actual dollars | in 1954 dollars | 1954 | Per cent of Increase |
| Managers, officials, and proprietors, except farm | $2,030 | $3,926 | $4,908 | 25.0% |
| Sales workers | 1,032 | 1,996 | 2,604 | 30.5 |
| Public school teachers | 1,441 | 2,787 | 3,950 | 41.5 |
| Professional, technical, and kindred workers | 1,373 | 2,655 | 3,874 | 45.9 |
| Craftsmen, foremen, and kindred workers | 1,298 | 2,510 | 4,210 | 67.7 |
| Operatives and kindred workers | 850 | 1,644 | 2,897 | 76.2 |
| Laborers, except farm and mine | 667 | 1,290 | 2,353 | 82.4 |

Source: Public school instructional staff: 1939: U. S. Office of Education: *Statistics of State School Systems, 1951-52.* 1954: National Education Association: *Advance Estimates of Public Elementary and Secondary Schools for the School Year 1955-56.* All Others: U. S. Bureau of the Census, *Current Population Reports,* Series P-60, No. 19.

the Commission on Intergovernmental Relations concluded:

> [The reports] show major internal inconsistencies which raise doubts whether the data are comparable, and whether they can be added to arrive at a national total. . . . Few conclusions can be drawn from them other than that school building needs total many billions of dollars nation-wide, and that some states will need to modify existing laws in order to meet the needs.[16]

The Secretary of Health, Education and Welfare testified in March, 1955 before the House Education and Labor Committee that 476,000 classrooms would be needed by 1960. A report Its members were unable to agree on the validity of any of the quoted figures. The Committee's chairman, Governor W. Preston Lane, in his introductory speech at the Conference, stated that public school authorities in all states had been polled but that he gave the information they supplied with hesitance:

> Based on their [the school authorities'] replies, there is an over-all national need of 203,450 classrooms—76% of this need, they say, is due to accumulated backlog. . . . The cumulative need for five years (1955 to 1960),—on the basis of replies from 41 states—, the total national need, is estimated at 374,250 classrooms.

He added:

[16] Commission on Intergovernmental Relations, *A Study Committee Report on Federal Responsibility in the Field of Education,* p. 50.

[17] *Financing Public Education in the Decade Ahead,* December, 1954.

> My hesitation about these estimates is fear that in some instances the information given to us as to need may have a background of desire or budgetary consideration.

This parallels the experience of the New York State Commission on School Building Needs which reported in 1954:

> When these estimates were traced back to original sources it was found that they frequently combined intuition and optimum desires with basic and immediate needs.

The Commission found that only a very few districts could not meet their immediate school needs. New York decided not to participate in the previously-mentioned national school facilities survey of the U. S. Office of Education.

If information gathered within a state is unreliable, national data based on state reports are of even more questionable value. At congressional hearings on school building aid in May, 1955 it was revealed that less than one-third of the building needs reported from North Carolina were for classrooms, and more than two-thirds for auditoriums, gymnasiums, multi-purpose rooms, and so on.[18] Kentucky which has done less to meet its school building needs than any other state, reported that only 122 of its existing 4,616 school plants were satisfactory.

The U. S. Office of Education reported in November, 1955 that the "number of pupils in excess of normal capacity of the accessible publicly owned school plants in use" was 2,385,239.[19] On a basis of 30 pupils per classroom it would indicate that 79,508 classrooms are needed to eliminate overcrowding. To this would have to be added the number of classrooms which should be replaced because of obsolescence or for other reasons. The data reported from the various states show glaring inconsistencies which cast serious doubt on the usefulness of the national total.

A review of the conflicting estimates leads to the conclusion that most of them are at best informed guesses and at worst daydreaming. It will be impossible to arrive at reliable totals until more definite standards of need and cost are established and applied, as well as criteria of inadequacy or obsolescence and replacement need of existing plant. At present such computations can be made only with considerable qualifications, and should be treated with caution.

The following computations are based on the survey of the White House Conference Committee because it is the most recent one.

| | | |
|---|---|---|
| Needs in Fall 1955 .......... | 203,450 | classrooms |
| Enrollment increase of 10 million pupils in next 10 years | 333,000 | |
| Future obsolescence of present plant ...................... (beyond the replacement needs included among the 203,450 classrooms) | 150,000 | |
| | 683,450 | |

Actual construction in the current school year totals 66,300 classrooms.[20] At that building rate the "backlog" would be wiped out by 1966.

If we accepted the five-year cumulative need of 374,250 classrooms as correct, and assumed that the current building rate were maintained, a short-

[18] *Federal Aid to States for School Construction*, Hearings before the Committee on Education and Labor, House of Representatives, 84th Congress, 1st Sess., p. 892.

[19] U. S. Office of Education: *Fall 1955 Statistics on Enrollment, Teachers and Schoolhousing, etc.*, November, 1955.

[20] U. S. Office of Education, *Release of November 30, 1955*, Circular 467.

age of 42,700 classrooms would remain in 1960; it would be wiped out by about 1962 or 1963. This means that we would then have the best school housing conditions that have ever existed in the United States.

However, school building construction has been increasing at the rate of better than 10 per cent each year since the end of the war. If this rate of increase were maintained, the " backlog " would be wiped out before 1960.

The Finance Subcommittee of the White House Conference Committee estimated the school construction need over the next 10 years as follows: [21]

| | |
|---|---|
| Accumulated backlog ....... | $10 billion |
| Enrollment increase ........ | 10 billion |
| Obsolescence ................ | 5 billion |
| | $25 billion |

At the present rate of school construction outlays of over $2.7 billion annually, the backlog would be wiped out within 10 years; if the building rate continued its climb, the goal could be accomplished 2 or 3 years sooner.

Unfortunately, the picture is not quite as rosy as these national totals might indicate. Some states and communities are engaged in ambitious school construction programs and may soon catch up with their needs. Others, however, lag sorely behind. The unprecedented school building activity in Georgia and South Carolina is of little help to children in Kentucky and Alabama where conditions are deplorable. In some states and communities, lack of economic capacity is evident. Many more, however, are hampered by legal handicaps or lack the determination to tackle the problems under their own initiative. Whether the decision should be left completely to the citizens of those states or whether stimulation or aid by the federal government is called for has been argued for many years.

Suggestions have been made that better utilization of school buildings could help ease the classroom shortage.[22] The question has been raised whether any industry which is short on expensive facilities would let its existing facilities —and scarce manpower—go idle for three months each year. There has been some talk of extending or staggering school terms but little experimentation, because of strong resistance by teachers who—understandably—prefer their customary three months' vacations. The prospect of progress toward a fuller use of school buildings in the next few years is slim. The solution to the school construction shortage probably lies in the financial area.

[21] *Suggested " Homework " for the participants in the White House Conference on Education*, p. 63.

[22] See, for example, Committee for the White House Conference on Education: *Suggested "Homework" for the participants in the White House Conference on Education*, p. 27 and report of the conference session on school building needs. See also "Let's Cut School Vacations," *This Week Magazine* (August 22, 1954).

# THE EFFECTS ON CAPITAL EXPENDITURES OF A SHIFT FROM MONEY TO REAL INCOME FOR TAX PURPOSES

GEORGE F. BREAK *

THE unresolved question of what effect a shift from money to real values as a basis for income taxation would have upon the behavior of private spending has tantalized fiscal economists for many years, particularly during periods of fluctuating price levels. Theoretically, two opposing forces should be at work in determining the result of such a shift. On the one hand, the greater stability of income when stated in real magnitudes should mean that a movement from money to real income for planning purposes alone during periods of price changes should stabilize private spending. On the other hand, a change-over from money to real income for tax purposes alone will tend to destabilize both cash balances and income net of taxes, and hence should destabilize private spending.

Since it is very likely, however, that the tax shift itself will induce a change-over to real income for planning purposes, we cannot in the absence of empirical evidence be certain as to which way the balance will swing.[1] The purpose of this study is to provide that empirical evidence for one important and highly volatile segment of the private spending picture during a period of rapidly rising prices—the capital spending of industrial corporations in the United States during the 1946-1948 inflation.

Most of the analysis is devoted to a determination of the size of the planning shift. In the second section companies sampled are classified according to the extent to which in their annual reports they adjusted and interpreted their money income figures for the effects of rising prices. It is true, of course, that the adjustments which are made for the purposes of the annual reports do not necessarily indicate what is done as far as the planning of capital

* The author is Assistant Professor of Economics at the University of California, Berkeley. He is indebted to the Bureau of Business and Economic Research of the University for assistance in connection with this article.

[1] Cf. E. Cary Brown in *Effects of Taxation: Depreciation Adjustments for Price Changes* (Boston: Harvard Graduate School of Business Administration, 1952), p. 89. "The change in timing of tax collections that would be induced by replacement-cost depreciation for *tax* purposes seems definitely destabilizing. The change in business decisions that would be induced by replacement-cost depreciation for *book* purposes does not point clearly in the direction of greater stability or instability. We conclude therefore that the effects of replacement-cost depreciation for tax and book purposes point toward instability. We hasten to caution the reader, however, that this effect is not sharply pronounced or definitively established."

K. Lacey, on the other hand, takes a strong position to the effect that widespread use of real income would exert an important stabilizing influence on business fluctuations. See his *Profit Measurement and Price Changes* (London: Pitman & Sons, 1952), especially pp. 25-32. J. Keith Butters reaches an intermediate conclusion in his *Effects of Taxation: Inventory Accounting and Policies* (Boston: Harvard Graduate School of Business Administration, 1949), pp. 101-108. For a more extensive theoretical discussion of the issue than that given in the text, the reader is referred to either the Brown or the Butters study.

expenditures is concerned. Nevertheless, it is felt that of two fairly large groups of corporations, the one making the more extensive price adjustments in its annual reports will very likely pay closer attention to real, as distinct from money, income in setting the level of its capital spending.

Once the extent of the departure from money income has been established, the effects of all other factors which might influence the level of capital expenditures must be neutralized before the size of the planning shift may be determined. For this purpose the analysis of capital spending in the third section is based only on the ratios of capital expenditures to the value of capital assets owned by the companies in question, and these ratios are computed only for fairly large groups of companies in the hope that in such groups the effects of the unwanted factors will cancel out to a considerable extent. The size of the planning shift is then estimated in the fourth section, and in the fifth section the extent of the tax shift is approximated. The final section summarizes the findings of the study.

### *Methods of Adjusting Money Income for Price Changes*

A study of the annual reports for 1947 and 1948 of some 256 industrial corporations, each having total assets of $50 million or more, shows a variety of reactions to the effects of rising prices. Nevertheless, the companies can be classified into six reasonably homogeneous categories, beginning with those making the least adjustment for price fluctuations and proceeding gradually to those making more and more important adjustments:

Class 0 contains all companies which failed to discuss in any way the effects of price changes on the meaning of money income figures.

Class 1 contains those corporations which undertook some discussion, usually in the body of the letter to the stockholders, concerning the high and rising replacement costs of either plant and equipment or inventory items, the subject being left at that level. These statements varied in length from one or two sentences to several paragraphs. In general, they emphasized either the fact that rising replacement costs meant that some proportion of money income had to be reinvested in order to maintain capital equipment physically intact (frequently as an explanation of the low level of dividend payments), or that conventional accounting techniques based upon original cost distorted money income figures in an upward direction when replacement costs rose above original costs. The discussion was qualitative for the most part, but a number of companies cited quantitative examples whereby original and replacement costs were compared for specific items of equipment.

Class 2 is composed of companies that confined their price adjustment to a quantitative allowance for the effect of price changes on inventory items. For the most part this allowance took the form either of appropriations to a special reserve for future possible price declines on inventory items or of the application of last-in, first-out (LIFO) cost-

ing to some or all inventories. A few companies which appeared, from the discussion of their inventory costing techniques, to be following methods, such as standard cost, very similar to LIFO were also included in this class.

Group 2 is ranked ahead of group 1 on the price adjustment scale on the argument that on the average a quantitative adjustment of money income is more significant than a qualitative one.

Class 3 is made up of companies employing a quantitative adjustment for the effects on money income of increasing replacement costs of plant and equipment. Such allowances were recognized only when they were explicitly labeled as appropriations to a reserve for high or excessive costs of fixed assets, as additional depreciation taken because of abnormally high replacement costs, and so forth. Some companies stressed the nature of these appropriations by discussing them in the body of the report and emphasizing net income after the deduction of the special depreciation allowances; others gave them less prominence on both counts.

Quantitative price adjustments for plant and equipment are considered to be somewhat more important than similar adjustments for inventories because, for industrial corporations as a whole and also for the manufacturing, mining, and trade areas from which most of the sampled corporations come, capital assets owned tend to exceed inventories in value.[2]

Class 4 contains those companies making price adjustments of *both* the Class 1 and Class 2 types. Such corporations combined a quantitative allowance for the effects of price changes on inventory items with a qualitative discussion of the effects of rising replacement costs of plant and equipment.

Class 5 comprises companies making price adjustments of both the Class 2 and Class 3 types. All companies in this group, then, made two quantitative allowances for the effects of rising prices, one applying to inventories and the other to capital equipment.

In addition to price adjustments of the types just described, a number of companies took their money income figures for several years and converted them to a constant-dollar series (based generally on the immediate pre-war period) by dividing them by a general price index. This last conversion is not an alternative to the other adjustments, but becomes a necessary addition to them if income figures of different years are to be compared.[3] The four Class 5

[2] See, for example, balance sheet data as published by the Bureau of Internal Revenue in Part 2 of their *Statistics of Income*.

[3] Consider, for example, the following data:

| | | | |
|---|---|---|---|
| Time | $t_0$ | $t_1$ | $t_2$ |
| Dollar asset values | $a_0$ | $a_1$ | $a_2$ |
| Price index | $P_0$ | $P_1$ | $P_2$ |

Adjustment of inventory or depreciable assets to a current replacement cost basis is comparable to a conversion of the *a* figures to end-of-period dollars before computing the gain or loss to the owner of the asset for the period in question. For period $t_0 t_1$, then, adjusted income is $a_1 - a_0 \cdot P_1/P_0$, and for $t_1 t_2$ it is $a_2 - a_1 \cdot P_2/P_1$. These two income figures are not directly comparable, however, since the first is in $t_1$ dollars and the second in $t_2$ dollars. Conversion to a constant-dollar series requires a further adjustment of one of the figures by multiplying it by the ratio of the other price index to its own index. In $t_2$ dollars, for example, the two income figures are $P_2/P_1[a_1 - a_0 \cdot P_1/P_0]$ and $a_2 - a_1 \cdot P_2/P_1$. The same result could also have been obtained by converting each of the *a* figures to $t_2$ dollars at the outset and then simply subtracting them to get the two income figures. The important point here, however, is that even after

(See next page)

companies which added this conversion to their other price adjustments, therefore, should really be segregated into a separate category representing the most extensive price adjustment of all. This has not been done, however, because of the small number of corporations involved.

Somewhat more difficult to classify are ten other companies whose price adjustments included a conversion of money income figures to a constant-dollar series but excluded any quantitative adjustment to a current replacement-cost basis of either inventories or capital assets or both.[4] Clearly, the conversion to a constant-dollar series places the company in a higher price adjustment class than it would otherwise be in. On the argument that to the user of the adjusted figures such a conversion is at least as important as a quantitative adjustment of both inventory and depreciable asset items to a current replacement-cost basis, all ten companies have been placed in Class 5.[5]

Table 1 summarizes the results of our price adjustment classification for five asset-size groups, the bottom row showing all companies in the sample. Approximately one-third of the 256 companies made no adjustment of any kind for the effects of price changes on money income. On the other hand, 28 per cent of them made a quantitative allowance for the effects of price changes on either inventory or plant and equipment items (classes 2 and 3), and another 28 per cent made a quantitative allowance for inventory items together with either a qualitative or a quantitative allowance for plant and equipment (classes 4 and 5). A quantitative price adjustment of some kind, in other words, was made by 56 per cent of the companies. It must be recognized, of course, that some of these adjustments are more important than others, and in the next section an attempt is made to separate the relatively insignificant allowances from the more important ones.

The breakdown into five asset-size classes, each containing approximately 50 corporations, shows that in general the largest companies tended to make more extensive price adjustments than did the smaller companies. Corporations with total assets of at least $150 million, for example, are more heavily concentrated in price classes 4 and 5 and less concentrated in classes 0 and 1 than are companies falling in the three smaller asset-size groups. Price classes 2 and 3, as might be expected, present a more irregular picture, tending, if anything, to resemble classes 0 and 1 more than classes 4 and 5.

### *Ratios of Capital Expenditures to Value of Capital Assets*

Capital expenditures for the 1947-1948 period were obtained for 225 of

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money figures have, for each year, been converted to a current replacement-cost basis, a further conversion of the resulting income figures is necessary if several years are to be compared during a period of changing price levels.

[4] Complete omission of the adjustments to a current replacement-cost basis would be equivalent to a straight subtraction of the *a* figures in the preceding footnote before any conversion to real income is made. Subsequent conversion to $t_2$ dollars would then yield the following two real income figures for $t_0t_1$ and $t_1t_2$ respectively: $P_2/P_{01}$ $(a_1 - a_0)$ and $P_2 - P_{12}$ $(a_2 - a_1)$, where $P_{01}$ is the price index for the period $t_0$ $t_1$ and $P_{12}$ is the price index for the period $t_1$ $t_2$. In general these real income figures will not be equal to the correct ones derived in the preceding footnote, and hence must be regarded as approximations only.

[5] Admittedly this is a debatable decision, but elimination of the ten companies from Class 5 would not make any significant changes in the results obtained in the following sections.

the 256 companies studied in the second section.[6] For the most part the data came from the annual reports of the corporations themselves, but for 62 companies whose annual reports did not give any capital expenditure figures the dollar amounts of additions to property at cost as reported in Moody's *Manual of Industrial Securities* were used.[7] The figures obtained from both sources cover not only corporate purchases of new plant and equipment but also acquisitions of old capital assets and of land. Major purchases of other business units, however, were excluded since they involve a separate and distinct decision-making process.[8]

For each company 1947-1948 capital expenditures were divided by the gross amount of property, plant, and equipment owned by the corporation at the beginning of that period. This was done in order to adjust for the influence on capital spending of the size of the company, the relative importance of capital assets as compared to other types of assets, and any individual peculiarities of definition applying both to capital expenditures and gross capital assets. Property, plant, and equipment were taken gross of depreciation, depletion, and other amortization allowances on the argument that intercompany differences in depreciation and depletion patterns render the net figures less useful for this purpose.

TABLE 1

U. S. Industrial Corporations Classified According to Total Asset Size and the Extent to which Allowance was made for the Effects of Price Changes on Money Income in 1947 and 1948

| Total Asset Size (in millions of dollars) | Number of Companies | Percentage of Companies in Price Class | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | ALL * |
| $300 and over | 42 | 19.0% | 7.1% | 11.9% | 9.5% | 31.0% | 21.4% | 100% |
| 150 to 300 | 61 | 31.1 | 9.8 | 23.0 | 4.9 | 19.7 | 11.5 | 100 |
| 100 to 150 | 52 | 36.5 | 9.6 | 30.8 | 0.0 | 11.5 | 11.5 | 100 |
| 75 to 100 | 48 | 50.0 | 12.5 | 18.8 | 6.2 | 8.3 | 4.2 | 100 |
| 50 to 75 | 53 | 30.2 | 13.2 | 26.4 | 7.5 | 9.4 | 13.2 | 100 |
| All Companies | 256 | 33.6 | 10.5 | 22.7 | 5.5 | 15.6 | 12.1 | 100 |

* Detail will not necessarily add to totals because of rounding.

Table 2 summarizes the mean capital expenditure ratios for each of our six price adjustment classes. It will be noted that the spending propensity of companies which treated money income at face value (price class 0) is significantly greater than that of companies making some kind of price adjustment (price classes 1 through 5).[9] Within this latter group the individual price classes all have mean ratios that are

[6] For companies with noncalendar fiscal years the two-year period beginning during either the last half of 1946 or the first half of 1947 was taken.

[7] A random sample of companies for which both annual report and Moody's data were available showed only minor disagreements between the two sources of capital expenditure information.

[8] For similar reasons the $14.3 million spent by the Monsanto Chemical Company in 1947 and 1948 to replace the Texas City plant which was destroyed by fire in early 1947 were excluded from Monsanto's capital expenditures for those years. $13.4 million of the replacement expenditures were paid by insurance companies.

[9] Use of the word "significant" here signifies a subjective rather than a statistical judgment, since the mean ratios are not obtained from probability samples. For whatever value this information may have, the standard error of the difference between the first two mean ratios of the last column of Table 2 was found to be equal to 0.046.

closely similar to one another and hence significantly different from the ratio of companies making no price adjustment. Even more important for our purposes, however, is the fact that the mean ratios do not decline systematically as we go up the price adjustment scale from class 1 (least important adjustments) to class 5 (most important adjustments).

TABLE 2

CAPITAL EXPENDITURE RATIOS, 1947-1948, FOR LARGE U. S. INDUSTRIAL CORPORATIONS CLASSIFIED ACCORDING TO THE TYPE OF PRICE ADJUSTMENT APPLIED TO MONEY INCOME

| Price Class | Number of Companies | 1947-1948 Capital Expenditure Ratios: Number of Companies | 1947-1948 Capital Expenditure Ratios: Mean Ratio |
|---|---|---|---|
| 0 | 86 | 73 | 0.44 |
| 1 through 5 | 170 | 152 | 0.33 |
| | 256 | 225 | |
| 1 | 27 | 24 | 0.31 |
| 2 | 58 | 49 | 0.33 |
| 3 | 14 | 13 | 0.32 |
| 4 | 40 | 38 | 0.34 |
| 5 | 31 | 28 | 0.34 |

Up to this point companies have been classified solely on the basis of the type of price adjustment made; no distinction has been made between those adjustments which are so small in amount as to be of doubtful significance and those whose importance is less open to question. Table 3 summarizes the results of such a separation. For this purpose the 24 class 1 companies (those making only a qualitative price adjustment) have been placed in the insignificant category, and 17 companies, the importance of whose price adjustments could not be determined, have been segregated from the others. Quantitative adjustments for capital assets are treated as significant only if they exceeded two million dollars a year for the largest corporations (total assets of \$100 million and over) and one million dollars a year for the smaller companies (total assets between \$50 million and \$100 million). Finally, corporations using LIFO appear in the significant category if the ratio of LIFO inventories to total assets exceeds 10 per cent. These dividing lines, of course, are arbitrary. Nevertheless, they do set up significant and insignificant groupings which are approximately equal in size and large enough to allow considerable cancelling of the influences on capital expenditure ratios of factors other than the extent of the price adjustment applied to money income.[10]

The most striking feature of Table 3

[10] The 78 companies making a significant price adjustment constitute 35 per cent of the 225 companies for which capital expenditure data are available. This result may be compared with the conclusion reached by the U. S. Federal Trade Commission on the basis of a study of 508 manufacturing corporations in 25 selected industries: "In 1947, the amounts appropriated from income for special reserves were substantial in less than 10 per cent of the corporations studied. For the most part, such appropriations were made to provide for 'contingencies,' for possible future price declines in inventories, and for excessive current construction costs and higher replacement values of fixed assets." See *Report of the Federal Trade Commission on Rates of Return (After Taxes) in Selected Industries for the Years 1940 and 1947*, August 16, 1948, pp. 3-4. The Federal Trade Commission, however, did not deal with companies using LIFO without additional appropriations to inventory reserves. Twenty-one such companies were included in the significant category of Table 3, and this number, therefore, should be subtracted from the original 78 companies. This leaves 57 significant companies or 25 per cent of all capital expenditure companies. This is still considerably higher than the Federal Trade Commission's 10 per cent figure. Part of the difference probably results from the fact that their study included more smaller companies which, as Table 1 indicates, tended to make significant price adjustments less frequently than large companies. In addition, their definition of a substantial adjustment may have been more stringent than ours.

is the closeness of the two mean capital expenditure ratios for companies making a significant and insignificant price adjustment.[11] Our earlier conclusion that companies making no price adjustment tend to have higher capital spending propensities than companies making some kind of adjustment, therefore, is substantiated when the latter group is contracted to include only those corporations whose price adjustment was of some importance. Within the significant-adjustment class as a whole, the mean capital expenditure ratios for the individual price classes are closely similar not only to one another but also to the ratios obtained for the same price classes in Table 2.

TABLE 3

CAPITAL EXPENDITURE RATIOS, 1947-1948 FOR LARGE U. S. INDUSTRIAL CORPORATIONS CLASSIFIED ACCORDING TO THE TYPE AND SIGNIFICANCE OF THE PRICE ADJUSTMENT APPLIED TO MONEY INCOME

| Group | 1947-1948 Capital Expenditure Ratios | |
|---|---|---|
| | Number of Companies | Mean Ratio |
| Companies Making a Significant Price Adjustment | | |
| Price Class 2 | 30 | 0.37 |
| Price Class 3 | 12 | 0.32 |
| Price Class 4 | 15 | 0.33 |
| Price Class 5 | 21 | 0.33 |
| All Companies | 78 | 0.35 |
| Companies Making an Insignificant Price Adjustment | 57 | 0.34 |
| Companies Making A Price Adjustment of Unknown Importance | 17 | 0.24 |

One final refinement may be considered briefly. Class 5 does contain three companies making an insignificant inventory price adjustment and seven companies making an inventory adjustment of unknown importance. At least the first group of three and some or all of the other seven, therefore, should be placed in class 3 (significant quantitative adjustment for capital assets only). A shift of only the first three, however, makes no change in the mean ratios for the two price classes involved. If all ten companies are shifted, the capital expenditure ratio for class 5 is raised to 0.37, and that for class 3 is lowered to 0.31.

On the basis of the evidence set forth in this section two conclusions may be drawn:

(1) Companies making no price adjustment tended to have higher capital spending propensities than those corporations which made some kind of price adjustment, however extensive or important. In 1947-1948 the mean capital expenditure ratio for the no-adjustment group was approximately 0.44 and for the other group was in the neighborhood of 0.33.

(2) Capital spending propensities tended to be highly insensitive to the nature and extent of the price adjustment adopted, and, in particular, there is no evidence that the capital expenditure ratios fall as the importance of the price adjustments increases. The important factor, evidently, is the making of the price adjustment itself. Further refinements appear to exert relatively little influence on capital expenditures.

### *Estimated Size of Planning Shift*

Given the mean capital expenditure ratios derived in the third section, the size of the planning shift—i.e. the extent to which capital expenditures will

[11] Allocation of a substantial majority of the companies in the unknown adjustment class to either the significant or insignificant categories would lower their mean ratios only slightly (from 2 to 3 points in each case).

change as a result of a shift from money to real income for decision-making purposes—may be estimated as soon as the total capital expenditures of companies in each of our six price classes are known. Table 4 provides the necessary information. It will be noted that

TABLE 4

1947-1948 Capital Expenditures of 225 Large Industrial Corporations Classified According to the Type of Price Adjustment Applied to Money Income

| Price Class (1) | 1947-8 Capital Expenditures (millions of dollars) (2) | Column 2 Expressed as Percentage of Total * (3) | Number of Companies (4) | Column 4 Expressed as Percentage of Total * (5) |
|---|---|---|---|---|
| 0 | $1,584.6 | 14% | 73 | 32% |
| 1 | 1,100.5 | 10 | 24 | 11 |
| 2 | 1,331.8 | 12 | 49 | 22 |
| 3 | 640.0 | 06 | 13 | 06 |
| 4 | 3,485.7 | 30 | 38 | 17 |
| 5 | 3,349.0 | 29 | 28 | 12 |
| | $11,491.6 | 100% | 225 | 100% |

* Detail may not add to totals because of errors of rounding.

companies making the most extensive price adjustments (those in classes 4 and 5) accounted for nearly 60 per cent of the total 1947-1948 capital expenditures, although by number these companies comprised only 30 per cent of the sample. Nearly one-third of all companies made no price adjustment whatsoever, but the relative importance of their capital spending was less than half this figure.

In Table 3 it was noted that the mean 1947-1948 capital expenditure ratio for those companies making significant price adjustments of the most extensive kind (price classes 4 and 5) was equal to 0.33. This figure will be used as our standard estimate of the mean capital expenditure ratio to be expected under full use of real income during an inflationary period when the mean ratio for companies using money income (as shown for price class 0 in Table 2) is 0.44. (The effects of departures from this standard assumption will be explored at a later point.) If, then, class 0 companies had had, during 1947-1948, the same average capital spending propensity as companies in classes 4 and 5, the level of their capital expenditures would have been reduced by some 25 per cent— $\frac{(.44 - .33)}{.44}$ of $1,585 million, or by $396 million.

This standard estimate of $396 million for the size of the planning shift in the sample is too small to the extent that some of the companies in price classes 1 through 5 which had not fully adjusted to a real income planning basis would have spent less on capital assets if they had made the full adjustment. The existence of such companies, by making the standard ratio of 0.33 too high, renders our reduction of 25 per cent in the capital spending of class 0 companies too small. In addition, some reduction should have been made in the capital expenditures of companies in price classes 1 through 5. If, for example, the true mean capital expenditure ratio for companies on a full real income planning basis is 0.32 rather than 0.33, our standard estimate of the size of the planning shift is too small by $283 million; for a true ratio of 0.31 our estimate is $586 million too low; for a true ratio of 0.30 our estimate is $924 million too low, and for each additional decline of one point in the ratio an additional error of $338 million is introduced.[12] These are not small

[12] The $924 million error, for example, is derived as follows: With a mean ratio of 0.30 for companies

(See next page)

amounts.

Two considerations, however, indicate that our standard estimate of \$396 million, although probably somewhat too low, is not likely to be very much too low: first, as already noted, the capital expenditure ratios computed in the preceding section tend to be highly insensitive to significant changes in the amount of the price adjustment applied to money income, and second, all corporations that applied a price adjustment to their capital asset accounts, by using either the straight list prices of the assets involved or a more or less general price index number, significantly overestimated the extent of the price rise through a neglect of improvements in quality. Tangerman, for example, stated in 1949 that "both tools and machines have been tremendously improved—so much so that even the rather sharp price increases of the last three or four years are more than balanced." [13] Other illustrations of significant quality improvement are not difficult to find.[14] Many companies, in other words, may have come rather close to a full real income basis as a result of over-sized partial adjustments.

The next step in the analysis is to raise the standard estimate of the size of the planning shift for the sample to the level of the population. With very few exceptions our sampled corporations came from manufacturing, mining, and wholesale or retail trade.[15] An estimate of the total capital expenditures made by all U. S. corporations in these industries may be derived from data compiled by Lawrence Bridge. He estimates that "In the five years 1946 through 1950, corporate manufacturers' expenditures for new plant and equipment totaled . . . about 96% of the total for all manufacturing." [16] For 1948 he and Natrella estimate corporate capital expenditures in mining and trade to be some \$1,941 million or 48 per cent of

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on a full real income basis, the reduction in capital spending if all class 0 companies shift to real income will be $\frac{(0.44-0.30)}{0.44}$ 1,585 = 504 million. Similarly if all class 1 companies shift to a full real income basis, the reduction in their capital spending will be $\frac{(0.31-0.30)}{0.31}$ 1,100 = 35 million; if all class 2 companies make the same shift, the reduction will be $\frac{(0.33-0.30)}{0.33}$ 1,332 = 120 million, and so forth. using observed ratios of 0.32 for class 3 and 0.33 for Classes 4 and 5, we obtain a total estimated reduction in capital expenditures as a result of a shift of all companies to a real income basis of \$1,320 million, a figure which exceeds our standard estimate of \$396 million by some \$924 million.

The incremental error of \$338 million which applies to each point reduction below the level of 0.31 for the true real income ratio may be obtained by carrying out a similar set of calculations with the expressions in parentheses replaced in each case by 0.01.

13 E. J. Tangerman, "Do Machine Tools Cost Too Much?" *American Machinist* (September 8, 1949), p. 90.

14 Cf. Gilbert Burck and Sanford S. Parker, "The Mighty Multiplier," *Fortune* (October, 1954), p. 228: "Prudential Life Insurance Co., in its Newark, New Jersey, office, has contracted to install an I.B.M. Type 702 processing machine (which competes with Remington Rand's UNIVAC and rents for about \$400,000 a year) that will send out eight million or more premium notices and account for as many remittances. Out of a total of 131 machines, Type 702 will displace sixty to seventy-five heavy processing machines—office sorters, reproducers, accounting machines, and calculators—and most of their operators. Annual savings may come to \$500,000."

For a brief discussion of the problem specifically related to depreciable assets see E. Cary Brown, *op. cit.*, pp. 131-134.

15 The exceptions fall either in transportation or in the service industry. They constitute such a small part of these two industries as to throw grave doubts upon their representativeness. For this reason the industries in question are excluded from the present analysis.

16 Lawrence Bridge, "Capital Expenditures by Manufacturing Industries in the Postwar Period," *Survey of Current Business* (December 1951), p. 17.

total spending in those industries.[17] Applying the 96 per cent ratio to total business spending on new plant and equipment in manufacturing for 1947 and 1948 and the 48 per cent ratio to similar spending in mining and trade in 1947, we estimate 1947-1948 total corporate capital expenditures in the three industries to be $21,296 million.[18] Capital spending by the corporations in our sample over the same period was $11,492 million or 54 per cent of the total figure. Some 14 per cent of the $11,492 million was concentrated in price class 0 (Table 4). Presumably a greater percentage of the capital expenditures of $9,804 million made by companies outside of our sample was located in price class 0. Within the sample itself, for example, 38 per cent of the capital spending of corporations with total assets between $50 million and $150 million was done by class 0 companies, and for companies with total assets between $50 million and $75 million the corresponding figure was 33 per cent. If we take the larger of these two percentages, our estimate of the capital expenditures of class 0 companies outside of the sample will be $3,726 million. The standard estimate of the size of the planning shift for the population as a whole will then be $396 million plus 25 per cent of $3,726 million, or some $1,330 million. This is the amount by which a shift from money to real income for planning purposes should decrease capital expenditures on the part of corporations in manufacturing, mining, and wholesale and retail trade during an inflationary period similar to 1947-8.[19]

[17] Lawrence Bridge and Vito Natrella, "Capital Expenditures by Nonmanufacturing Industries," *Survey of Current Business* (August, 1952), pp. 19-23.

[18] The breakdown by industry and year is as follows:

| | Manufacturing (in millions of dollars) | Mining and Trade (in millions of dollars) |
|---|---|---|
| 1947 | $ 8,355 | $2,231 |
| 1948 | 8,769 | 1,941 |
| | $17,124 | $4,172 |

Total expenditures on new plant and equipment by all U. S. business firms for the same two years was $17,837 million in manufacturing and $8,688 million in mining and trade. *Ibid.*, p. 20.

These figures are not strictly comparable to our sample capital expenditures since the latter include purchases of land and old capital assets. Published data on these last two items, however, do not appear to be available in the form required here.

[19] For each point by which our estimate of 38 per cent for the percentage of nonsample capital expenditures falling in price class 0 is in error, our standard estimate of the planning estimate will be off by .01x.25x9,804 = 24.5 million. If, for example, 50 per cent of such expenditures is in class 0, the planning shift will be increased from 1,330 to 1,330 + 12x24.5 = 1,624 million.

As noted above, our standard estimate of 0.33 for the mean capital expenditure ratio of companies fully adjusted to a real income basis may be somewhat too low. For each point by which it is too low, the planning shift for nonsampled companies is too low by (.01/.44)3,726 + (.01/.33)6,078 = 269 million if 38 per cent of such companies fall in price class 0 and by (.01/.44)4,902 + (.01/.33)4,902 = 260 million if 50 per cent of them fall in price class 0. These figures may be combined with those derived above in footnote 12 to yield the following estimates of the total planning shift (amounts in millions of dollars):

| Mean Capital Expenditure Ratio for Companies on a Full Real Income Basis | Planning Shift in the Sample | Nonsample Planning Shift if 38% of Companies in Class 0 | Total Planning Shift | Nonsample Planning Shift if 50% of Companies in Class 0 | Total Planning Shift |
|---|---|---|---|---|---|
| 0.33 | $ 396 | $ 932 | $1,328 | $1,226 | $1,622 |
| 0.32 | 679 | 1,201 | 1,880 | 1,486 | 2,165 |
| 0.31 | 982 | 1,470 | 2,452 | 1,746 | 2,728 |
| 0.30 | 1,320 | 1,739 | 3,059 | 2,006 | 3,326 |
| 0.29 | 1,658 | 2,008 | 3,666 | 2,266 | 3,924 |

Beyond this point both total planning shifts increase by approximately $600 million for each single point decrease in the mean capital expenditure ratio below 0.29.

### *Approximate Extent of Tax Shift*

For our present purposes the tax shift represents the extent to which 1947-1948 capital expenditures would have been larger than they actually were as a direct result of the greater disposable incomes and cash balances generated by a tax on real, rather than money, income. A fairly close estimate of it may be obtained from published data by estimating the effects of shifting inventories and depreciable assets from an original to a current cost basis, and then applying a similar price adjustment to cash and investment-assets. For privately owned producers' durable equipment as a group, Nassimbene and Wooden estimate that the ratio of current cost depreciation to original cost depreciation was 1.34 in 1947 and 1.35 in 1948.[20] These ratios, as the authors stress, are but rough approximations, being based upon the average lifetime for all durable equipment as determined from Bureau of Internal Revenue data and upon price indexes which fail to take into account an unknown amount of quality improvement. On the first count, the ratios should be raised or lowered accordingly as they are to be applied to a group of assets that is longer- or shorter-lived than the average; and, on the second count which involves quality change, each of the ratios is too high.

In spite of these difficulties, the ratios will be used to derive a rough approximation to the amount by which corporate tax bills, in the three industries with which we have been concerned, would have been lowered in 1947 and 1948 by a shift to replacement cost depreciation for tax purposes. In those two years corporations in manufacturing, mining, and trade that filed income tax returns with net income claimed a dollar total of $6,229 million for depreciation.[21] When the 1947 portion of this total ($2,811 million) is multiplied by 0.34 and the 1948 portion ($3,418 million) by 0.35 and the two results added together, we obtain $2,152 million as a measure of the decline in the tax base resulting from a shift to replacement cost depreciation.

The tax base in those two years would not necessarily have declined by exactly this amount, even assuming the 0.34 and 0.35 ratios to be perfectly accurate. Some of the corporations with net income would not have had enough to absorb the full amount of the additional replacement cost depreciation to which they would be entitled, except through the use of carry-overs in earlier or later years. On the other hand, some of the corporations filing returns with no net income in 1947 might have been able to absorb, in 1948, not only their 1947 deficit but also the additional replacement cost depreciation for both 1947 and 1948. Similarly, some companies with deficits in 1948 might have been able to carry back to 1947 not only their 1948 deficit but also their additional replacement cost depreciation for both years and to offset these amounts fully against 1947 net income. No account of either of these possibilities is taken in our calculations, and the resulting errors provide some offset to our neglect of the wastage of additional depreciation allowances by com-

[20] Raymond Nassimbene and Donald G. Wooden, "Growth of Business Capital Equipment, 1929-53," *Survey of Current Business* (December, 1954), p. 21.

[21] See U. S. Treasury Department, Bureau of Internal Revenue, *Statistics of Income*, Part 2, Table 3 for 1947 and 1948.

panies with net income in both 1947 and 1948.

For the price adjustment applicable to inventories we may take the Department of Commerce's national income estimates of the 1947 and 1948 inventory valuation adjustment for corporations in manufacturing, mining, and trade. For the two years together this adjustment amounted to some $7,302 million.[22] Price adjustments for other types of assets are more difficult to estimate from available data, but could easily come to $3 billion to $4 billion.[23] The total tax base shift may, therefore, be estimated at approximately $13 billion. The tax shift itself may be derived by multiplying the $13 billion figure by the corporate tax rate to obtain the reduction in income taxes which would result from a shift from money to real income and then multiplying the result by the structural parameter reflecting the reaction of corporate capital spending to changes in disposable income. A tax rate of 0.50 and a marginal propensity to spend on capital assets of 0.76 as obtained in the investment equation of the Goldberger-Klein model of the U. S. economy for 1929-1941, and 1946-1950, for example, yields a tax shift of some $5 billion.[24]

On the basis of rather rough estimates, therefore, the tax shift appears to be significantly greater in size than the planning shift. As far as corporate capital expenditures in manufacturing, mining, and trade are concerned a shift from money to real income for tax purposes during an inflationary period should tend to increase them, thereby adding to the already existing inflationary powers.

*Summary*

The main object of the present study has been to estimate the effect on the capital expenditures of corporations in manufacturing, mining, and trade of a shift from money to real income for tax purposes during a period of price inflation. To this end the annual reports of over 200 of the largest U. S. industrial corporations have been analyzed for the 1946-1949 inflationary period. The main findings may be summarized as follows:

1. Corporations which applied no price adjustments to money income in their annual reports showed significantly higher capital spending propensities than did corporations which adopted some kind of price adjustment.

2. Among corporations making some price adjustment capital expenditures were markedly insensitive to changes in the type and amount of these adjustments.

3. On the basis of this evidence it was estimated that a shift from money to real income for planning, but not for

[22] U. S. Department of Commerce, Office of Business Economics, *National Income, 1954 Edition* (A Supplement to the Survey of Current Business), p. 195.

[23] On an average cash balance of some $17 billion, together with holdings in land and unclassified assets of about $6 billion, the purchasing power loss during 1947 and 1948, calculated on the basis of the BLS wholesale price index for all commodities, would have been approximately $3.6 billion. In addition, corporations with net income in manufacturing, mining, and trade reported during 1947 and 1948 some $900 million in the form of net gains on the sale of capital and other assets. Some, and perhaps most, of this gain would have been eliminated by a shift from money to real income.

[24] See Lawrence R. Klein, "The Empirical Foundations of Keynesian Economics," in *Post Keynesian Economics*, edited by K. K. Kurihara (New Brunswick: Rutgers University Press, 1954). Klein's coefficient, of course, is not precisely tailored to our purposes, being based upon deflated nonwage income, after taxes but before depreciation, and gross deflated investment rather than upon corporate money income net of taxes and corporate capital expenditures.

tax, purposes would have reduced corporate capital spending by approximately \$1.33 billion during 1947 and 1948. This estimate, however, is based upon a number of debatable assumptions set forth in the fourth section, and may be a billion or so too small.

4. A shift from money to real income for tax purposes during 1947 and 1948 would have reduced the corporate tax base of manufacturing, mining, and trade corporations by approximately \$13 billion dollars, and this, in turn, might be expected to have increased their capital expenditures by \$5 billion or so.

5. A shift from money to real income for both tax and planning purposes, therefore, should increase capital expenditures by \$1 billion to \$3 billion. In addition, the decrease in the tax base, through its expansionary effect on cash balances, might well stimulate other types of corporate spending which are not closely related to income. In these cases the shift from money to real income for planning purposes would have no substantial offsetting influence. It appears, therefore, that a corporate income tax based on real income would, on balance, lead to a higher level of spending during a period of price inflation than would a tax on straight money income. This destabilizing effect represents one important disadvantage of such a change in tax policy.

# TOWARD A SOCIAL THEORY OF PROGRESSIVE TAXATION

HAROLD M. GROVES *

PROGRESSIVE income taxation has been practiced in all enlightened countries for at least a generation. But lately it has been subject to increasing attack. The attack not only proposes anti-progression amendments, but also leaves the impression, in the form of books and articles on the subject, that the intellectual underpinnings of progressive taxation are inadequate, and that, at bottom, when all the invalid arguments and rationalizations have been stripped aside, there is little if anything left but envy and political irresponsibility. The mood of the critics is expressed by the title of a book emanating from the Chicago Law School, *The Uneasy Case for Progressive Taxation.*[1] The subject of taxation has been approached often enough by writers on welfare economics; but the subject of welfare economics has seldom been approached by scholars primarily interested in public finance. It is not our purpose here to make a case for or against progressive taxation, but we do aim to consider the mode of thought and the nature of the evidence that can lead to an intelligent opinion.

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1 Walter J. Blum and Harry Kalven, Jr., *The Uneasy Case for Progressive Taxation,* (University of Chicago Press, Chicago, 1953). On the whole the book is an excellent and objective summary of the literature on progressive taxation. But in this writer's opinion it does far less than justice to the stronger arguments for progressive taxation; this perhaps accounts for its skeptical title and tone.

## *Historical Survey*

Space does not permit an elaborate account of the abundant literature presenting the pros and cons of progressive taxation.[2] In general, the most persuasive and popular justifications are of four types:

First, there is the classical justification [3] in terms of the diminishing utility of goods as more of them are ac-

2 See Blum and Kalven, *op. cit.,* E. R. A. Seligman, *Progressive Taxation in Theory and Practice,* publication of the American Economic Association, Vol. IX, Nos. 1 and 2, 1894; F. Shehab, *Progressive Taxation,* (New York: Oxford University Press, 1953); Elmer F. Fagan, "Recent and Contemporary Theories of Progressive Taxation," *Journal of Political Economy,* Vol. 46, No. 4, August 1938, pp. 457-498.

3 Developed mainly by Mill, Cohen-Stuart, Carver, Edgeworth and Pigou. See John Stuart Mill, *Principles of Economics,* (Ashley ed.), London, 1923, Book V, Chap. II; A. J. Cohen-Stuart, *Bijdrage tot de Theorie der Progressive Inkomstenbelasting,* 1889; *A Contribution to the Theory of the Progressive Income Tax,* (1889) (Ms. trans. Te Velde, Univ. of Chicago Libraries, 1936); T. N. Carver, "The Ethical Basis of Distribution and its Application to Taxation," *Annals of American Academy of Political and Social Science,* Vol. 6, July 1895, pp. 79-99; F. Y. Edgeworth, "The Pure Theory of Taxation," *Economic Journal,* Vol. VII, 1897, pp. 550-571, reprinted in *Papers Relating to Political Economy,* (London: Macmillan and Co., Ltd., 1925), Vol. II, pp. 100-124; A. C. Pigou, *A Study of Public Finance,* (London: Macmillan and Co., Ltd., 1928), Part II, Chaps. I-VII.

The marginal utility concept itself was developed during the Eighteen Seventies by Karl Menger and Stanley Jevons. The latter was probably the first to apply it to income as a whole. See Karl Menger, *Principles of Economics* (trans.) (Glencoe, Ill: The Free Press, 1950), Chap. III; W. Stanley Jevons, *The Theory of Political Economy,* 4th ed., London, 1911, pp. 140-141.

quired. For example, a person's second automobile presumably is worth less to him (per dollar) than his first, and either is worth less than his three meals a day. Moreover, it is reasoned that A's second automobile must be worth less to him than B's three meals a day are to the latter; one can move from this to compare the marginal utilities of their incomes as such. Since large incomes are important chiefly in terms of prestige, and since prestige is a relative matter, the decline in utility with increased accumulation would seem to be substantial. If the decline is faster than the rise in income, it follows that to take equally from individuals in terms of satisfaction, tax rates must be progressive. Moreover, any fall in the utility curve, regardless of degree, would justify progression if the aim is to minimize rather than equalize sacrifice. However, the minimum sacrifice doctrine is strong medicine and without qualification leads to confiscation.[4]

This time-honored analysis has invited a barrage of persuasive criticism.[5] It involves interpersonal comparisons but ignores the fact that A and B may have different capacities to enjoy the good things that income makes available. The hedonistic calculus is introspective; subjective reactions are not susceptible to measurement, at least not with the degree of precision that suits the needs of tax legislation. Declining utility is a theory of consumption and legitimately may not be extended to cover savings. Persuasive rejoinders have been offered to some of these objections: It is said that individual variations from an average capacity for enjoyment will be random variations about an average, and that these may be ignored in dealing with large numbers of people as taxation must.[6] While highly precise measurement and comparison of subjective reactions is not possible, it can give us adequate approximations. Because we think the major case for progressive taxation lies elsewhere, the argument will not be pursued further.

The second approach to progressive taxation, largely developed by Seligman,[7] supports the principle on the basis of "faculty." This term was used to include, in addition to sacrifice, the idea of power as a criterion for tax levies. It is obvious that money earns money, and that the first increments of wealth and income are hardest to acquire. If the power to meet tax bills increases more than proportionately as income advances, progressive taxation is indicated. But there is no conclusive nor very persuasive evidence that $10,000 of income affords more than twice as much power as one of $5,000. The theory serves most plausibly to support proportional taxation as against absolute equality of taxes.

[4] The above oversimplified statement omits the ingenious proportional-sacrifice concept of Cohen-Stuart. This calls for sacrifice in proportion to total utilities of taxpayers' incomes; its aim is to leave taxpayers with regard to such utilities in the same relative position; it would support progression even if the decline in utilities were somewhat less rapid than the rise in incomes.

[5] See, Blum and Kalven, *op. cit.*; Fagan, *op. cit.*; M. Slade Kendrick, "The Ability-To-Pay Theory of Taxation," *American Economic Review*, Vol. XXIX, No. I, Part I, March 1939, pp. 92-101. Relevant also is the abundant literature on welfare economics; for a critical summary see D. H. Robertson, *Utility and All That*, (New York: The Macmillan Company, 1952), Chap. I.

[6] Well presented in Abba P. Lerner, *The Economics of Control*, (New York: The Macmillan Company, 1944), Chap. 3.

[7] *Op. cit.*, pp. 127-200.

The third approach to our problem, associated with such names as Simons and Taussig,[8] justifies progression in terms of a preferred distribution of income after taxes. It eschews entirely the idea of equity in the distribution of taxes as such and seeks it instead in the distribution of income. And, in support of a particular pattern of the latter, the proponents enter a plea of " value judgment ". Says Simons: [9]

> Taxation must affect the distribution of income, whether we will it so or not; and it is only sensible to face the question as to what kinds of effects are desirable. To do this is to reduce the discussion frankly to the level of ethics or aesthetics. . .
>
> The case for drastic progression in taxation must be rested on the case against inequality—on the ethical or aesthetic judgment that the prevailing distribution of wealth reveals a degree (and/or kind) of inequality which is distinctly evil or unlovely.

The fourth line of approach, often associated with Adolph Wagner though more sharply conceived and phrased by Elmer Fagan, considers progressive taxation in terms of its social, political, and economic effects. These effects may be considered propitious in the realization of certain national objectives and ideals.[10] To be sure almost all writers have felt obliged to consider at least some of the effects of progression. But this has been collateral to the main argument and often to temper what appeared to be the extreme demand of equity as such. Notwithstanding the fact that it always makes good sense to judge any institution by its total effects, this methodology as applied to progressive taxation has been rarely used and scantily developed. This is regrettable because this approach seems to afford a detour around the futile snarls of the classical case and the pure value judgment of the Simons-Taussig school. But does it?

[8] Henry C. Simons, *Personal Income Taxation*, (Chicago: University of Chicago Press, 1938), Chap. I; F. W. Taussig, *Principles of Economics*, (4th ed.; New York: The Macmillan Company, 1939), pp. 539-540.

[9] *Op. cit.*, pp. 18-19.

[10] Seligman, (*op. cit.*, p. 131) leaves the impression that Wagner would utilize taxation to equalize wealth completely and do this so to speak for its own sake.

H. C. Adams leaves an entirely different impression as follows: " The idea of Professor Wagner seems to be that the State should no longer content itself with the raising of an adequate amount of revenue, but in raising revenue should consider broad social and industrial conditions, and employ revenue machinery in such a way as to check any unhealthy influence that may be observed in society, or to bring about those social and industrial conditions under which alone the ideal of the nation may be realized. If now it be conceded that a fair degree of equity in the possession of wealth is essential to the realization of what is best in democracy, and if the application of the principle of progression to the scheme of taxation is adequate to establish such equity, this concession is conceived by Professor Wagner to be adequate justification of the application of the progressive principle; and, admitting the premises, it is difficult to see how one can evade the conclusion. (*The Science of Finance*, Henry Holt and Company, New York, 1898, p. 342). The latter interpretation appears to be the more accurate of the two. But it cannot be said that Wagner either formulated or strictly applied a doctrine for judging taxation by its effects. (See Adolf Wagner, *Finanzwissenschaft*, 2nd. ed., Leipsig, 1890, Vol. I, Par. 27; Vol. II, Par. 159; see also excerpt in Charles J. Bullock, *Selected Readings in Public Finance*, Ginn and Company, New York, 1924, pp. 254-258; Donald O. Wagner, *Social Reformers*, New York, 1935, pp. 490-506.

Elmer Fagan (*op. cit.*, p. 489) stated the case for the effects-approach definitely, though somewhat negatively, as follows: " Progressive taxation cannot be declared to be more desirable than either regressive or proportional taxation unless it can be shown that progression will increase to a higher degree than will either regression or proportionality the objective desiderata which have been established by intersubjective agreement." (See also M. Slade Kendrick, *op. cit.*).

### *Progressive Taxation and Economic Science*

Here we must deal with the school of thought that regards matters of public policy as too unscientific to be included in economic science. We recall the fundamental distinction drawn between ends and means; the former involve people's tastes, desires and biases; the latter involve objective relationships. Inquiry as to means describes the operation of a machanism and determines the consequences of changing its constituent parts. As long as we confine ourselves to means, we may hope to achieve agreement among all intelligent critics; if we become entangled with ends we can expect others to accept our findings only so long as their values or preferences are the same as ours.[11] Doesn't the Wagnerian approach to progressive taxation take us down a road that must end in a (subjective) value-judgment?

We shall forego all temptation to indulge in argument concerning several debatable points in the above paragraph. At best, substantial qualification of the ends-means dichotomy seems required to make it acceptable. But let us proceed forthwith to the final question and try to answer it simply and sensibly. Certainly we do know that any opinion concerning the wisdom of progressive taxation will be one upon which reasonable men may differ. Opinions will vary not only because critics have different values or weigh them differently, but also because they will appraise the evidence (means) differently. But it isn't the opinion of the scholar that is important to this picture; what counts is his analysis of the evidence required and his contribution to that evidence. It is possible for economists to determine the consequences and effects of progressive taxation without being for or against them.

Starting with some ends that are reasonably tangible and proximate (Wagner's national objective), one surely may conclude that an important field of inquiry concerns the bearing of progressive taxation on these ends. Value judgments generally are a hazard in the social studies, and fertile fields cannot be left to fallow on this score. If this important area of inquiry is not a part of economic science and is inappropriate for " economists *qua* economists ", then it must engage the attention of economists in a broader role or that of scholars in other fields. The policy questions that we might submit to the electorate are not ones concerning which the social scholar's opinion is conclusive or even necessarily important. They *are* questions that are amenable to important evidence which it is his function to supply.

### *Ends and Means (Effects) in Progressive Taxation*

What are some of the ends that progressive taxation might be expected to serve or disserve? And what is the nature of the effects by which it must be judged?

Before proceeding to more specific matters, however, we must dispose of another point of methodology. Both the ends and effects include a large area which is political and social rather than

11 For a statement and discussion of this point of view see J. R. Hicks, " The Foundations of Welfare Economics," *Economic Journal*, Vol. 49, December 1939, pp. 696-712; Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, (London: Macmillan and Co., Ltd., 1931). Compare Frank H. Knight, *Freedom and Reform*, (New York: Harper and Brothers, 1947) Chap. IX.

economic. Here the economist may, if he wishes, confine himself to his specialty and treat only economic ends and effects. But in so doing he should warn his reader that he is presenting only part of a single picture. Somebody, sometime, must take the trouble to present the picture as a whole, and no one may be better qualified for this role than the economist.

We often hear it said that our institutions must serve the public interest if they are to be approved, and this might seem to be a satisfactory criterion (end) for public decisions. But the word " interest " is first cousin to " welfare " which in turn is related to " happiness ", and these are loaded words for philosophers. Since we are seeking to minimize argument, at least that of the futile variety, let us start with some more proximate and tangible ends. Let us assume that we are interested in what progressive taxation will do to serve or disserve such widely accepted national objectives as an increase in per capita real income, minimum economic fluctuations, a workable tax system producing adequate revenue, political stability under representative government, international independence or security, elimination of extreme want, and perhaps mitigation of social disorders, such as crime, divorce, mental illness and the like. If anyone wishes to quarrel with this list we stand ready to entertain amendments. What chiefly concerns us is the effects of taxation in terms of a list of this kind. The effects that we should include in our inquiry are both those which flow directly from the tax itself and those that follow indirectly from the influence of the tax on the distribution of income. It will be noted that we treat the distribution of income as an intermediate means rather than an end.

Beginning with effects, we may mention first the familiar economic considerations. Here, of course, a major concern is the effect of progressive taxation on incentive and capital supply, which in turn might adversely affect the national income. Considerations of aggregative economics, however, might reverse or modify this conclusion. A desirable balance between saving, consumption, and investment could be promoted by progression, and the element of built-in-flexibility associated with progression might or might not be an important stabilizer. Associated with the distribution of income after tax is the improvement of human resources.[12]

The fiscal effects of the tax scale involve us, of course, in considerations of its contribution to the revenue and the complications it adds in defining the tax base. The latter are impressive; with the abandonment of progression many of the problems of timing and income-splitting would largely disappear.[13]

The possible political effects of progressive taxation, too, are impressive and, of course, must be included in any balance sheet that pretends completeness. Here there is concern about the taxpayer's retaining the means and leisure to keep himself informed on the issues of government. There is also concern lest wealth become so unequal that only part of the people can afford the important and expensive means of po-

[12] Here one recalls the argument of Pigou that the marginal net product of resources *wisely* invested in persons is likely to exceed that of resources wisely invested in material capital. A. C. Pigou, *The Economics of Welfare*, (London: Macmillan and Co., Ltd., 1920), Part V, Chap. XI.

[13] Blum and Kalven, *op. cit.*, pp. 14-19.

litical communication. In a democracy any minority has small protection indeed if it has no effective way of making itself heard and seen by large numbers of people. There is also the matter of political stability; it may or may not be true that the discontent associated with wide inequality is more important on this score than the resentment of those who regard extreme progression as a flagrant case of "spending other people's money."

Closely related to political considerations are those concerning international security. This involves the opportunities of youth. Illiteracy and physical defects limit military manpower; these defects may be associated with the distribution of income. A principal though invalid propaganda point of our potential enemies is that a free economy must be one of extreme inequality.

Considerations that may be classed as social include such matters as the relation, if any, of poverty and riches to crime and delinquency, ill health and unstable family relationships.[14]

The above summary treatment is intended as an outline of what is involved in an ends-effects analysis and is necessarily incomplete as to detail and bareboned as to elaboration. Relation of specific effects to specific ends is obvious and can be left to the reader. The outline is not intended as a substantive treatment—much less a point of view. Both would require elaborate examination, not only of much deductive argument but also of considerable empirical evidence on some points. Both would indicate the need for more evidence to further illuminate the problem. All we are trying to do is to support the thesis that this is the kind of calculus that will both stimulate inquiry and lead to an intelligent opinion on progressive taxation.

### *Progressive Taxation and Equity*

The essence of equity in taxation is impartiality, and this is highly conditioned by what is and is not thought to serve the public interest. Impartiality requires equality of consideration rather than equality of treatment. In the famous Biblical case, King Solomn in allotting a child to one of two claimant mothers hardly would have been obliged to divide the child, even if the claims of the parties had been of equal merit.[15] Smith with a $10,000 income might be required to pay taxes at a higher rate than Jones with a $5,000 income—and vice versa—if it can be shown that important national objectives are served thereby. It can be argued, of course, that fairness, of and by itself, should be recognized both as an end and a means in the tax calculus. We have already conceded as much when we observed that equity requires impartiality of consideration. But doesn't this rule also require a higher rate of tax for higher incomes? Perhaps it does; but support for such proposition involves all the subjective probings of the classical analysis which we think it wise to avoid.

Always troublesome to both defenders and critics of progressive taxation is the minimum of necessities that

[14] It may be argued that some of the effects here mentioned, particularly those that relate to the distribution of income, are problems of public expenditure rather than taxes. The two are closely related, of course, but neither excludes the other. Thus a proportional tax might provide the means to insure education for youth but defeat its own end by so depleting the private means of poor people that the physical health of many students could not be maintained.

[15] I Kings 3:16-28.

serves as the basis for taxpayers' personal exemptions. Allowance for these is often accepted by the critics on the ground that biological necessities represent infinite utilities and afford no ability to pay whatever. There may be some validity in this approach, but again a far more persuasive case for personal exemptions can be built on the balance of their social effects. There is a strong social interest in minimum income, not so much for its own sake as because it enables the individual to meet his social responsibilities. The Elizabethan Poor Law was designed not out of sympathy for the poor but to prevent the nuisance of vagrancy. But to pay our respects to altruism, which is no doubt an important factor in our day, we have already suggested that the alleviation of acute suffering is one of the proximate objectives that taxation is expected to serve.

The Wagnerian approach to taxation raises, of course, the old issue concerning the use of taxation for so-called nonfiscal purposes. In view of the inevitability of tax effects, and the necessity of taking account of them, one can conclude confidently that there never was much substance in the allergy to nonfiscal motives. And in these days of aggregative economics when the term "fiscal policy" is conceived mainly as a matter of economic influence, the presence of a nonrevenue motive in tax legislation is hardly a cause for censure. One need not go so far as Abba P. Lerner to question the propriety of a *revenue* motive.[16] But we must reject or substantially modify the view of Sir Josiah Stamp who states: "In my judgment, progressive taxation has the happy result of assisting to rectify inequalities, many of which are not economically or ethically justifiable, but it does not *exist* to do this and it has its justification quite apart from this."[17] We have not made an end of reducing inequality, and we have sought to avoid ethical implications, but we do find the major justification of progression in its economic and other effects, including, of course, its effect on the revenue.

It may be said that even though one might make a legitimate argument for progressive taxation along the lines suggested by Wagner, one could never get from this approach any adequate basis for setting rate differentials. But this aspect of the problem is less troublesome for us than for those who argue the classical case. The setting of a progressive scale is a pragmatic phenomenon; legislators feel their way along, bearing in mind a host of social consequences that are in the balance. The quest for certainty in this area, as in many others, is doomed to failure.

### *Summary and Conclusion*

This article has presented and defended the view that the major case for and against progressive taxation must be found in its economic, political and social effects. We have further contended that this largely avoids the futilities of the classical approach and the debate-closing value judgment of the ethical-aesthetic position. We have not contended that value judgments can be avoided in drawing conclusions on this or any other policy question. But we *have* insisted that this approach opens the way for the maximum of objective inquiry which is as much as can be ex-

[16] *Op. cit.*, pp. 307-308.

[17] *Fundamental Principles of Taxation*, (London: Macmillan and Co., Ltd., 1921), p. 177.

pected in most of the important scholarly activity described as the social studies. We have suggested that the balance sheet related to tax scales must include a broad range of effects, and that some of the more important are political rather than economic.

In any society there is a generally accepted " ethic " or range of value judgments that pervades the entire fabric of the society. These lie behind the phrase " public interest " and support an objective analysis of institutions in terms of effects. However, if one is challenged to state these values he need not find it too difficult to be more specific. The ends are irrelevant anyway except as a guide to the significant means and as a basis for a final appraisal.

The approach here suggested may lack popular appeal; it is true that the so-called common man has been thoroughly conditioned to the view that a graduated burden is the essence of equity in taxation. We have not argued that his intuition on this score is necessarily entirely unfounded or lacking in tenable intellectual support. But his is the " uneasy " case for progressive taxation, and it has seldom been defended by competent critics without resort to the collateral area of effects—for reinforcement, modification or rejection. It is a short step, accomplished with very little loss, to move in the calculus from the individual to the social —to weigh tax alternatives not in terms of the personal but rather the social significance of income. Certainly the transition affords no easy conclusion that support for progression at bottom is envy, irresponsibility, and hypocrisy.

# FINANCING THE FEDERAL RECLAMATION PROGRAM: REIMBURSEMENT ARRANGEMENTS AND COST ALLOCATIONS

PEGGY HEIM *

THE federal reclamation program is accelerating rapidly, and with this mushrooming of more numerous and expensive projects has come a pressing need to analyze the financial principles upon which the program rests. From the passage of the Reclamation Act in 1902 to June 30, 1952, the federal government invested $2,198,610,000 in the construction of projects under the reclamation laws.[1] And, if it could secure appropriations, the Bureau of Reclamation proposed to construct during the seven-year period 1953-1959 new facilities amounting to $2,110,835,000.[2]

However, even if Congress were willing to appropriate the necessary funds, the government will not initiate construction unless the project under consideration meets two sets of requirements of economic feasibility: (1) the estimated benefits derived from the project must at least equal the total project costs; (2) the project must fulfill certain other financial conditions. This study is concerned primarily with the second set of requirements, which will be termed "conditions of financial feasibility." These provisions largely determine who will bear what proportion of costs and in what manner, how much the government will spend on reclamation, and which features of multiple-purpose projects the program will stress.

Financial feasibility depends upon the principles adopted for reimbursement of the outlay and cost allocation. Instead of using fixed financial criteria the government operates within a flexible framework based only upon the principle that project revenue must cover the costs specified as repayable. This study proposes to investigate the nature of the reimbursement arrangements and cost allocations and to develop some of the resulting issues.

## *Reimbursement Principles in Practice*

Reimbursement policy, including the principle of full reimbursement of the cost of construction, the length of the repayment period, and the source of revenue for meeting repayment obligations, has undergone extensive modifications.

*Reimbursable and nonreimbursable costs.* Congress has gradually moved from a policy of full to partial reimbursement of construction costs. When the reclamation program began in 1902, the increment in land value accruing from the provision of a water supply led Congress to impose the full cost of

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[1] U. S. Bureau of Reclamation, *The Reclamation Program, 1953-1959* (Washington: 1952), pp. 2-3, 20.

[2] *Ibid.*, p. 20.

construction upon the water-using beneficiaries. As projects became multiple-purpose in nature, some costs became nonreimbursable. With the passage of the Reclamation Project Act of 1939 Congress extended the benefits of river and harbor improvements to federal reclamation projects; costs properly allocated to navigation and flood control became nonrepayable.[3] When Congress broadened its program of federally-financed resource development in 1946 to include fish and wildlife conservation, the Bureau of Reclamation began allocating costs to this nonreimbursable function.[4] In addition, the Bureau sought and has obtained nonreimbursable appropriations for features such as recreation, justified on grounds of national benefit.[5] With few exceptions, the government requires reimbursement only for irrigation, power, and municipal water allocations; of these three, irrigation is interest free.

*The repayment period for irrigation.* The Reclamation Act of 1902 imposed upon irrigation beneficiaries a ten-year repayment period for the construction costs. Within a few years after the water users began paying their annual construction charges, political pressures and financial difficulties among the settlers and landholders caused Congress to extend the repayment period for all projects to twenty years—later, to forty years.[6] Recently new pressures have caused Congress to revise some of the project contracts, reducing the amount of the annual construction charge and extending the repayment period, in some cases to as long as eighty years.[7] In respect to new projects, amortization periods of fifty and sixty years are replacing the previously established forty years. The absence of interest charges encourages water users to seek the longest possible repayment period.

The government determines the amortization period for construction costs—on both existing and new projects—partly from farm budget studies which indicate the annual sums water users might be expected to pay for irrigation. These studies show that for some projects water users will require an extended repayment period or the application of other revenues to help repay their construction obligation.

*Application of revenues to meet irrigation costs.* The Reclamation Act of 1939 made the costs allocated to irrigation, municipal water, and power reimbursable by their respective beneficiaries; only irrigation was interest free. Under this repayment policy financial feasibility of a project depended upon whether each group of beneficiaries could and would repay the costs allo-

[3] Reclamation Project Act of August 4, 1939, sec. 9b; 53 Stat. 1187.

[4] Public Law 732, 79th Cong., 2d sess., effective August 14, 1946.

[5] *Weber Basin Project, Utah,* U. S. Senate Doc. No. 147, 81st Cong., 2d sess. (Washington: 1950), pp. 10-11.

[6] For a description of the financial difficulties and political pressures which placed the government in a weak creditor position see Peggy Heim, *Financing the Federal Reclamation Program, 1902 to 1919: The Development of Repayment Policy* (Dissertation submitted to Columbia University, 1953), Publication No. 8683, University Microfilms, Ann Arbor, Michigan.

[7] Renegotiation under Section 7 of the Reclamation Act of 1939 usually occurs either where water users are delinquent in their annual payments or about to become delinquent. Reasons for delinquency include deteriorating economic conditions, unproductive land, an increase in repayment obligations to the government as a result of graduated repayment schedules or supplementary construction charges, increased irrigation costs resulting from emergencies or rehabilitation work, and return to dry farming. Sec. 7 contracts for the Vale, Umatilla, Belle Fourche, Milk River, and Shoshone Projects.

cated to that function. In 1943 the Commissioner of Reclamation changed his interpretation of the act, ruling that power revenues in excess of power costs could be credited against costs allocated to irrigation but beyond the capacity of irrigators to repay.[8] A year later the Solicitor of the Department of the Interior expressed the opinion that the interest component as well as net power earnings could be used to offset costs allocated to irrigation.[9] Although the Bureau of Reclamation at first opposed this interpretation, it later began to use both the interest component and net power earnings to establish financial feasibility. In some instances, generally where power revenues proved inadequate to repay the remaining irrigation costs, the Bureau also applied both the interest component and surplus earnings from municipal water to irrigation reimbursement. As a result of these interpretations, irrigation beneficiaries sometimes pay less than 50 per cent of the costs allocated to irrigation.

*Methods of Cost Allocation*

When the government adopts the principle of making some costs reimbursable and others nonreimbursable or of requiring revenue from the sale of a given product or service to repay the entire cost of that function, the methods of cost allocation used become extremely important. The Bureau of Reclamation follows numerous allocation methods, depending upon the nature of the project and the economic and political objectives. The most frequently used method of cost allocation include: (1) benefits, (2) least alternative justifiable expenditure, (3) use of facilities, (4) priority of use.[10]

Under the benefits method the allocation to a particular function equals the derived benefit.[11] For example, the Bureau of Reclamation calculates flood control benefits in the following manner. From past river records it predicts the frequency of future crests of varying heights " without the project " in contrast to " with the project." It then estimates the flood damage as the cost of replacing, repairing, or rehabilitating the affected property, taking into consideration the fact that the presence of flood control may directly or indirectly lead to higher property valuation. In addition to prevention of physical damage of property, primary benefits may result through the avoidance of costs such as evacuation, relief, and care of flood victims. Primary flood benefits also include avoidance of direct loss

[8] For the Commissioner's earlier interpretation see U. S. House of Representatives, Committee on Irrigation and Reclamation, *Reclamation Project Act of 1939, Hearings on H. R. 6773*, 76th Cong., 1st sess., Part 5, June 22, 1939, p. 140.

[9] Charles D. Curran, *The Reclamation Program and the Interest Component*, prepared under the auspices of the Library of Congress, Legislative Reference Service for the Committee on Interior and Insular Affairs, House of Representatives, May, 1953, p. 6.

[10] U. S. Bureau of Reclamation, *Reclamation Manual*, Vol. XIV, "Cost Allocations," (Release 4, 9/5/51); U. S. House of Representatives, Committee on Public Works, *The Allocation of Costs of Federal Water Resource Development Projects, Report from the Subcommittee to Study Civil Works*, House Committee Print No. 23 (Washington: 1952), pp. 3-9.

[11] For an extensive discussion of the methods used in computing primary and secondary benefits for the various functions on multiple-purpose projects see Federal Inter-agency River Basin Committee, Subcommittee on Benefits and Costs, *Proposed Practices for Economic Analysis of River Basin Projects* (Washington: 1950), pp. 8-52; U. S. House of Representatives, Committee on Public Works, *Economic Evaluation of Federal Water Resource Development Projects, Report from the Subcommittee to Study Civil Works*, House Committee Print No. 24, 82nd Cong., 2d sess. (Washington: 1952) pp. 9-19.

through disruption of business and the net loss in agriculture. The Bureau of Reclamation counts the net loss resulting from reduced processing and handling of agricultural materials and their end products as secondary benefits.

Obviously the magnitude of the net loss and damage depends upon the level of employment and upon the cost-price relationships expected to prevail at the time the floods occur. The Bureau, however, makes little attempt to adjust its estimates for the level of economic activity, apparently assuming relatively full employment. Moreover, until recent years the average cost-price relationship prevailing from 1939 to 1944 was used in the Bureau's economic analyses, but current calculations are now based on a long-term price level roughly 50 per cent higher than the previously assumed ratio.

From the estimates of flood damages and losses incurred throughout the life of the project, limited to one hundred years, the Bureau calculates an average annual benefit. To take into consideration time preference, the Bureau determines the present worth of these average annual benefits over the life of the project or the one-hundred-year maximum. For example, the present net worth of flood control benefits of $100,000 per year at 2½ per cent interest and one hundred years of project life would amount to approximately $3,661,000.

*Least alternative justifiable expenditure.* Under the alternative-justifiable-expenditure method, allocations are based upon the lesser of two sums—either the value of benefits ascribed to a particular function or the projected cost of the most economical single-purpose project possessing the same features. This technique incorporates the principle that the government should spend no more than the value of the benefits. If, in determining the cost of alternative single-purpose projects, two or more hypothetical installations occupy the same site, the Bureau disregards this physical impossibility in computing the alternative justifiable expenditure.

*Use of facilities.* The use-of-facilities method incorporates the premise that the government should apportion joint costs among the various functions according to their relative use. Two major difficulties arise in the implementation of this theory: first, definition of use; second, comparison of different types of use. For example, flood control depends on storage capacity; irrigation, on the quantity of water released; navigation and power, on both the volume of released water and on the head through which that volume falls; and recreation, partly but not wholly, on the magnitude of the storage as well as on the quantity released. In view of the difficulty of reconciling the various approaches, the Bureau uses this method primarily in conjunction with other techniques.

*Priority of use.* The Bureau of Reclamation sometimes utilizes the priority-of-use method to alter cost allocations on the grounds that the various functions compete with each other and therefore should not share joint costs equally. When functions have different priorities for water, the Bureau may assign to the designated highest priority function its least alternative justifiable expenditure. The Bureau then allocates the remaining costs to the other functions in order of preference.

The Bureau applies these four tech-

niques singly or in some combination for the purpose of allocating joint costs —the costs which remain after deducting either the direct or separable costs of specific functions from total project costs. The direct costs include those facilities with single-purpose use, such as penstocks for power or ditches for irrigation. The separable cost for each purpose is the difference between the cost of the multiple-purpose project and the cost of the project without that particular function. Separable costs, the technique recommended by the Federal Interagency River Basin Committee, include all added costs of increased size of structures and changes in design to serve a particular function. After the Bureau determines the magnitude of joint costs, it apportions them among the several uses. For example, from the least alternative justifiable expenditure for each function the Bureau deducts its separable cost, sums the results, and expresses the remaining cost for each function as a proportion of the total remaining cost for the entire project. A hypothetical allocation of a ten million dollar project might look as shown in Table 1.

In some instances the Bureau deducts the least alternative justifiable expenditure of the nonreimbursable functions from the total project cost before allocating the remaining joint costs.[12] This technique has the effect of cost-loading the nonrepaying purposes and imposing upon the general taxpayer a greater share of the burden. Application of this method to the example cited would result in the following cost allocations (in thousands of dollars):

| Flood Control | Power | Irrigation |
|---|---|---|
| $5,000 | $1,667 | $3,334 |

[12] U. S. Bureau of Reclamation, *Reclamation Manual*, Vol. XIV, "Cost Allocations," Chap. 2.5.

Since many projects have at least two or more nonreimbursable functions, this technique affords outstanding opportunity to minimize the reimbursable costs.

TABLE 1

HYPOTHETICAL ALLOCATION OF PROJECT COST

| Item | Flood Control | Power (000) | Irrigation |
|---|---|---|---|
| Least alternative justifiable expenditure .......... | $5,000 | $4,000 | $7,000 |
| Separable costs ... | 2,000 | 2,000 | 3,000 |
| Remaining cost ... | $3,000 | $2,000 | $4,000 |
| Ratio: functional remaining cost /total remaining cost of $9 million | 33.33% | 22.22% | 44.44% |
| Allocation of $3 million joint cost .. | $1,000 | $ 667 | $1,333 |
| Total cost allocation ........... | $3,000 | $2,667 | $4,333 |

## *Criticisms of Financial Feasibility Analyses*

Perhaps one can best see how the Bureau of Reclamation arrives at a finding of financial feasibility by reviewing the cost allocations and reimbursement arrangements of a sample project. In 1951 Congress authorized the Palisades Project in Idaho. (See Table 2.) The Administration allocated to each nonreimbursable function its direct cost plus a share of joint costs equal in amount to the present worth of its annual benefits. The fish and wildlife and recreation allocations exceeded the present value of their estimated annual benefits.[13] After deducting these non-

[13] The Bureau converted net annual benefits to their present worth by application of the annuity factor of 25.73 for fifty years at 3 per cent interest. In addition to the present worth of net annual benefits, the Bureau assigned fish and wildlife and recreation direct costs of $350,000 and $148,000 respectively. *Palisades Dam and Reservoir Project, Idaho*, U. S. House of Representatives, Doc. No. 720, 82nd Cong., 1st sess. (Washington: 1951), pp. 18-19.

reimbursable costs from the total project cost the Bureau allocated the remaining sum among the reimbursable functions by assigning to each function its specific cost plus its share of the remaining joint cost. It apportioned these joint costs by averaging the allocation obtained under the priority-of-use and alternative-justifiable-expenditure methods. By imposing costs upon the nonreimbursable functions that either equaled or exceeded the present value of their net annual benefits, the Bureau secured an allocation highly favorable to the reimbursable functions.

TABLE 2

COST ALLOCATIONS FOR THE PALISADES PROJECT, IDAHO *

| Type of Cost | Cost Allocation | Per Cent of Total Cost |
|---|---|---|
| Nonreimbursable costs | | |
| Flood control ...... | $22,733,300 | 29.7 |
| Fish and wildlife .. | 2,805,000 | 3.7 |
| Recreation ........ | 6,296,000 | 8.2 |
| Reimbursable costs | | |
| Irrigation ......... | 21,724,400 | 28.4 |
| Commercial power . | 14,055,800 | 18.3 |
| Irrigation pumping power ........... | 8,986,500 | 11.7 |
| | $76,601,000 | 100.0 |

* Source: *Palisades Dam and Reservoir Project, Idaho,* U. S. House of Representatives, Doc. No. 720, 82nd Cong., 1st sess., p. 25.

According to the repayment analyses of the Palisades Project, power would pay off its cost allocation with interest of 2½ per cent, plus its contribution of $5,047,400 to irrigation, in fifty-six years. The Bureau planned to apply the interest component and surplus power earnings to offset 53 per cent of the irrigation obligation (Table 3). With the generous financial assistance from the power function, repayment of the irrigation indebtedness would require forty years.[14]

*Criticisms of Bureau allocation procedure.* The cost allocation procedures utilized by the Bureau provide for considerable flexibility, particularly useful in securing a determination of financial feasibility or in reducing the cost allocation to reimbursable functions. The extent to which the Bureau varies these cost allocation methods for these purposes is not known by the writer, but available evidence indicates that this does occur. On some projects it selects allocation procedures designed to benefit the reimbursable functions rather than those which allow all functions to share proportionately in the savings made possible by multiple-purpose development. In addition to the Palisades Project cited previously, somewhat similar cost allocations were used for both the Weber Basin Project and the Northside Pumping Division of the Minidoka Project. Where the Bureau has utilized the principle of separable costs and alternative justifiable expenditure, it has

TABLE 3

REPAYMENT OF IRRIGATION COST ALLOCATION, PALISADES PROJECT, IDAHO *

| Source of Funds | Amount | Per Cent of Total Cost |
|---|---|---|
| Payments by water users .............. | $10,305,000 | 47.4 |
| Application of power interest ........... | 6,372,000 | 29.3 |
| Use of surplus power revenues .......... | 5,047,400 | 23.2 |
| Total irrigation obligation ..... | $21,724,400 | 100.0 |

* Source: *Palisades Dam and Reservoir Project, Idaho,* U. S. House of Representatives, Doc. No. 720, 82nd Cong., 1st sess., p. 25.

[14] For repayment data see *Palisades Dam, op. cit.,* pp. 5, 22-26.

upon occasion assigned no separable cost to irrigation despite the fact that some features, such as irrigation ditches, have single-purpose use. This method reduces the allocation to irrigation.[15] The Bureau also has varied methods of cost allocations, averaging or combining the results of several different techniques, without visible consistency among projects. For example, on the Collbran Project the Bureau averaged the allocations obtained from the priority-of-use and alternative-justifiable-expenditure methods, while on the Weber Basin Project it allocated reimbursable joint costs on the basis of proportionate use of facilities.[16]

In some of its published reports the Bureau also fails to include pertinent data. For example, in the election year, 1954, Senator Guy Cordon pressed actively for Congressional authorization of the Talent Division of the Rogue River Basin Project in Oregon. An estimated increase in project cost, from $19,894,000 to $22,775,000, and the objection of the Budget Director to a sixty-nine year repayment period caused the Bureau to revise cost allocations.[17] Although the estimated cost of additional kilowatt capacity increased by 17 per cent, the Bureau increased the allocation to power by 47 per cent and reduced the previous allocation to irrigation.[18] The Bureau provided no data on how it arrived at its new allocation.[19] In the absence of adequate information, the observer can only wonder to what extent the allocation was varied in order to obtain a finding of financial feasibility.

*Criticisms of repayment arrangements.* Three main issues of repayment arrangements deserve examination: (1) the extent to which irrigation charges are actually set at a level based upon capacity to repay; (2) the practice of applying the interest components and net revenues from power and municipal water to offset the irrigation obligation; (3) the problem of the nonreimbursability of some allocations.

According to enunciated repayment principles, water users are expected to repay the irrigation obligation to the extent of their repayment ability; beyond this point the Bureau utilizes revenues and interest components from power and municipal water to offset the irrigation obligation. Some studies of financial feasibility cause the observer to wonder whether these irrigation construction charges are actually set at a level based upon capacity to repay or whether other considerations, such as the water users' willingness to pay or

[15] The writer recalculated costs for the Fryingpan-Arkansas project by assigning to irrigation specific costs of ten and twenty million dollars instead of zero. *Fryingpan-Arkansas Project*, House of Representatives, Doc. No. 187, 83rd Cong., 1st sess. (Washington: 1953), p. 7.

[16] U. S. House of Representatives, Report No. 1051, 82nd Cong., 1st sess., p. 31; *Weber Basin Project, Utah*, U. S. Senate, Doc. No. 147, 81st Cong., 2d sess. (Washington, 1950), pp. 10-11.

[17] Budget Director to Secretary of the Interior, June 11, 1954, U. S. Senate Report No. 2332, 83rd Cong., 2d sess., p. 4. The additional cost included $1,200,000 for additional power capacity and $1,700,000 for rehabilitation of existing irrigation facilities.

[18] *Ibid.*, p. 3; also U. S. House of Representatives, Report No. 2244, 83rd Cong., 2d sess., pp. 6-7, and *Talent Division, Rogue River Basin Project*, House of Representatives, Doc. No. 450, 83rd Cong., 2d sess. (Washington: 1954), pp. 112-13.

[19] The Bureau may have utilized the separable-costs and remaining-benefits technique, a method agreed upon in the spring of 1954 by the Army, Department of the Interior, and Federal Power Commission. Under this technique an increase in power revenue changes the benefit ratio to the disadvantage of power in cost allocations.

desire on the part of the Bureau to spread project costs over a wider base, may not also be an important consideration. In the Fryingpan-Arkansas Project, for instance, the need for increased irrigation revenue caused the Bureau to revise its estimates of annual net irrigation revenue from $272 million to $622 million. According to the Bureau the previous estimate had been based upon studies of repayment capacity.[20] The shift to the new long-term price levels should have warranted an increase of about 50 per cent, rather than the 129 per cent actually used in the revised calculations. In the absence of specific information, the observer might raise the question of whether construction charges are established by repayment ability or whether other factors influence the final determination.

Crediting interest components and net revenues from power and municipal water to offset the irrigation obligation has two results: (1) the credit is a form of subsidy to irrigation, and (2) it may serve as a device to shift some of the irrigation costs to indirect beneficiaries. Since the law requires the imposition of interest upon power and municipal water investments, application of the interest component represents a subsidy from the Treasury. Who bears the subsidy arising from the credit of net power and municipal water revenue depends upon rate levels in the absence of the crediting procedure. If lower rates would prevail, then users of power and municipal water help finance the irrigation function; otherwise, the loss of revenue causes the Treasury to bear the cost. Although these credits represent a subsidy to irrigation, the Bureau has generally failed to accent this point in its financial analyses.

To some extent the Bureau apparently has utilized the practice of applying net power and municipal water revenues in order to shift irrigation costs on the grounds that other groups benefit indirectly from the development of the project. The establishment of conservancy districts with the power to levy assessments against property has played a somewhat similar role. Four factors influence the choice of methods for shifting these costs: (1) equity in terms of benefits, (2) reduction of political pressure for project construction, (3) the effect upon the economic development of the areas, and (4) opposition to charges.[21] Determination of the most desirable method for shifting irrigation costs, however, requires further investigation.

The nonreimbursability of some allocations creates several problems. First, an administration desiring to promote reclamation can sometimes use the nonreimbursable functions to bear a large portion of project costs. The utilization of nonreimbursable cost allocations has reduced the costs to reimbursable functions and has aided in fulfilling the requirements of financial feasibility. Second, if conservancy district assessments can be advocated as a device for diverting part of the irrigation costs to indirect project beneficiaries, a similar

[20] *Fryingpan-Arkansas Project*, U. S. House of Representatives, Doc. No. 187, 83rd Cong., 1st sess. (Washington: 1953), pp. 8, 102, 128.

[21] Since other groups, such as bankers, merchants, lawyers, and real estate interests derive indirect benefits from project development and frequently exert strong political pressure to secure construction, imposition of charges upon these beneficiaries becomes economically desirable. See Peggy Heim, *op. cit.*, especially Chapter VIII; also testimony at Congressional hearings of local interests championing the cause of project construction.

method might well be used to recover part of the outlay from the beneficiaries of flood control, navigation, and recreation expenditures. Extension of the payment principle to the presently nonreimbursable functions would have at least two advantages. It would tend to reduce the political pressure from local groups for project construction and would occasion a re-evaluation of the system for calculating the large benefits presently claimed for the nonreimbursable functions.

*Conclusions*

Instead of attempting to discuss all issues arising from the present system of financing federal reclamation, attention will be limited to three problems: (1) functional subsidies—who bears what proportion of the cost; (2) the effect of the present flexible financial system upon the magnitude of the reclamation program and the selection of projects; and (3) the emphasis placed upon the various features of multiple-purpose project development.

*Functional subsidies.* The functional subsidy represents assistance given to a particular function. Assistance takes several forms. First, the government may minimize charges to some function by making over-generous allocations to nonreimbursable costs and by allocating the remaining costs to the benefit of one particular group, such as irrigation. Second, the government may apply revenue derived from one function to repay the obligation of another. On some projects the administration has applied the interest component and surplus earnings from power and municipal water investment against costs owed by the irrigators. These complex financial arrangements obscure both the magnitude of the functional subsidies and the incidence of their cost.

It is no easier to determine who bears the cost of these various forms of functional subsidy. For example, if surplus power revenues were not applied to offset irrigation costs, the government might either market the power at lower prices or deposit the profits in the Treasury. Without a careful study of cost allocations, the analyst can indicate only the most obvious part of the subsidy, namely, revenue from one function credited against the obligations of another.

*Allocation of funds.* The present flexible financial system exerts a strong influence on the magnitude of the reclamation program and the selection of projects. The lack of clarity in the Reclamation Act of 1939 provides financial criteria amenable to manipulation for purposes of furthering promotional interests of the administrative agency as well as the political aims of legislators. By varying repayment arrangements and cost allocations sufficiently, many projects can be authorized as financially feasible.[22] Generally speaking, after authorization Congress eventually appropriates funds to carry on the construction program. Reclamation grows apace. At the same time that the present system of analyzing financial and economic feasibility encourages expansion of the reclamation program, the failure to point out the magnitude of the federal financial contribution leads to uneconomic allocation of funds, both in selecting reclamation projects and electing alternative

[22] For recent examples of revised financial analyses see data on Fryingpan-Arkansas Project and Talent Division of the Rogue River Basin Project.

government expenditures.[23]

*Distortion of functional emphasis.* Financial manipulations distort the emphasis placed upon the various features of multiple-purpose project development.[24] In order to obtain a larger government subsidy the administration has sometimes appeared to overemphasize functions with nonreimbursable costs. More important, the practices of minimizing certain cost allocations and of applying revenues from one function to offset the obligations of another facilitate the use of scarce water for less economic purposes. Although the Bureau of Reclamation stresses the benefits derived from the production, processing, and marketing of project agricultural products, it does not discuss alternative benefits which might result from increased power development or availability of industrial water. From the standpoint of future western economic expansion, as well as national agricultural needs, these uses may be more essential than irrigation.

The flexible system for determining financial feasibility has several disadvantages. First, the determination of who bears what proportion of the cost becomes difficult, if not impossible. Second, by making additional projects appear financially feasible and therefore justified, its use has at times facilitated the building, for bureaucratic and political purposes, of questionable projects. Third, as a result of this flexible system the government may carry reclamation activity further than is desirable in relation to the agricultural problems of the country and the best use of its resources.

As a first step in reform this writer suggests new controls over studies of financial feasibility.[25] Under the present organization pattern each construction agency, in preparing financial analyses, makes its own cost allocations and estimates of revenue. The construction agency first submits its analysis to the Bureau of the Budget for review. If approved by the Budget Bureau, the report then is submitted to Congress. Because of relatively small working staffs, the appropriate congressional committees, as well as individual congressmen, rely heavily upon the financial studies submitted by the construction agency. But the enthusiasm and bureaucratic motives of these agencies, the pressures of national politics, and the principles of the administration influence these financial analyses. This writer therefore recommends the establishment of a separate federal agency to review cost allocations; estimates of construction, operation, and maintenance costs; and revenue prospects. Since the independent agency would merely review initial financial reports and not participate in the construction, it would have less vested interest in obtaining favorable findings of feasibility. To minimize political pressures, its director, as well as its staff, should be employed

[23] See S. V. Ciriacy-Wantrup, *Resource Conservation: Economics and Policies*, (Berkeley: University of California Press, 1952).

[24] Some of the issues involved are discussed in S. V. Ciriacy-Wantrup, "Cost Allocation in Relation to Western Water Policies," *Journal of Farm Economics*, XXXVI (February, 1954), 108-129.

[25] For further recent information see U. S. Commission on Organization of the Executive Branch of the Government, *Water Resources and Power, A Report to the Congress*, U. S. House of Representatives, Doc. No. 208, 84th Cong., 1st sess. (Washington, 1955); also U. S. Commission on Organization of the Executive Branch of the Government, Task Force on Water Resources and Power, *Report on Water Resources and Power*, 3 vols. (Washington, 1955).

under civil service and not, be subject to dismissal with a change in administration. This writer believes an independent agency, rather than the Bureau of the Budget, is needed to discharge the function of final review, for the Budget Bureau's close relationship to the Presidential Office makes it sensitive to political pressures. The establishment of an independent review may help reduce the political influences upon analyses of financial feasibility.

# FEDERALLY-BASED STATE INCOME TAXES

ROBERT M. KAMINS *

Uniformity of tax bases and of methods of tax computation minimizes conflicts by simplifying the taxpayers' work in preparing returns and by making possible intergovernmental exchange of tax information which results in more efficient and less expensive administration at all levels. Administrative cooperation has been most notable in the income tax field, where it is facilitated by some degree of standardization of tax bases and methods of tax computation. This kind of coordination should be expanded. (*The Commission on Intergovernmental Relations*, a report to the President for transmittal to the Congress, June, 1955, p. 106.)

INCOME taxation is a particularly ensnarled area in the jungle of intergovernmental fiscal relations. Fifty-one major American jurisdictions—37 states and territories,[1] the District of Columbia, a dozen populous cities, and the national government—as well as about 425 smaller communities currently impose income taxes on individuals, corporations, or both. To all three levels of government this levy presents at once the major form of taxation based upon ability-to-pay and a problem in large-scale overlapping and conflict with respect to tax policy and tax administration (see Table 1).

TABLE 1

AMERICAN JURISDICTIONS IMPOSING NET INCOME TAXES

(as of July 1955)

| | On Individuals Only | On Corporations Only | On Both | Total |
|---|---|---|---|---|
| Federal government | .. | .. | 1 | 1 |
| States ...... | 2 | 3 | 30 | 35 |
| Territories .. | .. | .. | 2 | 2 |
| District of Columbia .. | .. | .. | 1 | 1 |
| Large cities . | 4 | .. | 8 | 12 |
| Other local governments | 425* | .. | .. | 425 |
| TOTAL ... | 431 | 3 | 42 | 476 |

* All in Pennsylvania.

This problem, long discussed in the United States and in other federations, has given rise to a variety of proposals. One suggestion is that the states quit the income tax field, leaving it, as was arranged in Australia and Canada during the exigencies of World War II, the exclusive domain of the national government. This plan has been advanced by persons with greatly differing views as to the good and beautiful in public finance: some in the expectation that an "over-use" of income taxes would thereby be corrected; others advocating that the reform be accompanied by state sharing of the (presumably in-

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He acknowledges with thanks the contributions to the structure of the article made by Norman Meller, Professor of Government at the University of Hawaii.

[1] Throughout this article "state" also encompasses Alaska and Hawaii, since under their organic acts both incorporated territories have taxing powers fully equal to those of the forty-eight states—effectively larger, since they lack restrictive provisions in their organic acts and are not confined by any self-imposed constitutional limits or prohibitions. Congress retains power to amend or set aside territorial tax laws, but does not exercise that authority.

creased) federal income tax.[2] In terms of fiscal policy, the proposal that the states abandon income taxes may then lead to either increased or decreased use of income taxes, depending upon the action of the central government. In either case, however, the taxing power of the state is restricted and its reliance upon federal assistance probably enlarged.

However persuasive the case may be for the states to abandon the income tax to sole exploitation by the national government, they show no sign of being willing to do so.[3] Assuming that the states will not voluntarily surrender the income tax and the federal government is not now prepared to force or buy its surrender with a multiplication of grants-in-aid or with generous tax shares, solutions to the problem of overlapping national and state income taxes must be along the lines of co-operation and integration, rather than outright merger.

An approach has been made toward harmonizing state with federal income tax laws in the statutes adopted over the past several years, ranging from New England to the West Coast and Alaska. Congruity has been achieved in a number of ways and in varying degrees. Two western states, both under 1955 amendments, proportion their withholding of income taxes to the amount withheld under the national income tax. Idaho collects at the source 10 per cent of the federal withholding. Colorado, which otherwise maintains its full distance from the federal income tax law, withholds 4 per cent.

*Use of the Federal Tax Base*

Several other states go further by adopting federal definitions of taxable income, usually with some exceptions (such as deductibility of state income taxes or inclusion of interest from state bonds), but with not so many as to destroy the substantial identity of net income for both federal and state tax purposes.[4] Five northeastern states (Massachusetts, Connecticut, Rhode Island, New York and Pennsylvania) generally adopt the income definitions of the federal Internal Revenue Code in their corporate income tax laws; Idaho and Montana similarly adopt provisions of the code for personal income taxation, as does Arizona, but at the option of the taxpayer.

Vermont, among this group, is most comprehensive, not only in applying the federal computation of taxable income to both individual and corporate levies, but also in providing the minimum deviations from federal concepts and definitions. (For this reason a state income tax generally adopting the federal income tax *base* is herein referred to as the " Vermont type " of tax.) Vermont taxpayers are by statute given the

[2] As Henry Simons' proposal for " a generous sharing of federal revenues from personal taxes with the states ", in the light of the inherent limitations upon the effectiveness of state income taxes and " an extravagant duplication of administrative machinery and administration activities ". (*Personal Income Taxation*, University of Chicago Press, 1938), pp. 214-15.

[3] The viewpoint of the states was recently expressed by William Anderson in *The Nation and the States, Rivals or Partners?* (University of Minnesota Press, 1955), pp. 162-3, 173-4.

[4] Income from sources taxable by the federal government but not by a particular state, such as interest from securities having a tax *situs* outside the state in question, raise problems of tax computation under any of the forms of state income taxes discussed herein—as indeed they do under conventional state levies. This being recognized, plus the additional fact that most taxpayers do not receive income in such form, no further attention is here given to this important but special problem.

choice of reporting income under the rules of the federal Internal Revenue Code as it stood in 1947, when the state law was adopted, or under the current code. It appears that the latter option usually minimizes the amount of tax, as well as the amount of inconvenience on the part of the taxpayer.

Between 1953 and 1955 Utah gave the personal income taxpayer the choice of computing his state tax under a "long-form" calculation, using the definitions of the Utah statutes, or of using a short-form calculation employing federal income tax definitions. If he chose the latter form, the taxpayer reported the same taxable income as that returned to the Bureau of Internal Revenue, less federal income taxes paid.

Each of the foregoing states, it may be observed, adopted by reference portions of the Internal Revenue Code as it exists and *as it may be amended from time to time.*[5] Kentucky and Iowa currently also employ the federal definitions of taxable income, but adopt the definitions set forth in the code as it existed at the time the state law was enacted: 1954 in Kentucky, 1955 in Iowa. The significance of this distinction is considered in the ensuing discussion of the constitutionality of federally-based state income taxes.[6]

[5] The Hawaii legislature in May 1955 passed a tax measure (Senate Bill 818) incorporating by reference income tax definitions of the federal code, as it then read or might be amended, for both personal and corporate taxes. Certain provisions of the code, however, were explicitly not adopted—e.g. the exemption of federal cost-of-living allowances, the period of carry-forward and carry-back of net losses (continuing only a one-year carry-forward), etc. The bill was pocket vetoed.

[6] In passing, it may be noted that at least four municipalities also incorporate by reference federal rules for computing taxable income. In Louisville, Kentucky and Dayton, Ohio, the use of rules established by the Internal Revenue Code is mandatory; in Columbus and Springfield, Ohio, their use is optional for city taxpayers.

*Fraction of Federal Tax*

A few state jurisdictions have completely integrated their income taxes with that of the national government by imposing a levy computed as a fraction of the current federal tax. Since 1949, Alaska has required its taxpayers to pay the territorial government 10 per cent of their federal income taxes.

In the past few years Utah and New Mexico have experimented with optional personal income taxes based on the federal levy. From 1951 to 1953 Utah permitted taxpayers with adjusted gross incomes under $5,000 to pay 10 per cent of their federal tax in lieu of a "long-form" state tax. Were the federal tax rates to change, the law required the tax commissioner to adjust the percentage so as to maintain as nearly as possible the effective rates of the Utah tax. In New Mexico, between 1953 and 1955, persons receiving adjusted gross incomes of less than $10,000 similarly could pay either a separately-computed state tax, or 4 per cent of their federal obligation.[7]

The optional form of fractional taxation stops far short of the Alaska approach in tying the state to the federal income tax. By retaining its own definitions of income, and its own exemptions and rate structure, and by directing that the tax approximate an amount calculated under these independently-established definitions and rates, the optional form of federally-based tax is little more than an administrative device intended to simplify computation

[7] Correspondence with New Mexico administrators indicates that the optional tax was felt to be unfair, as well as costly in revenue, inasmuch as it gave the greater advantage to persons with two or more dependents.

of the state levy. The Alaska tax, however, adopts provisions of the Internal Revenue Code as they change from time to time as the sole basis [8] of determining territorial tax liability. Except to the extent that the biennial Alaska legislature changes the 10 per cent fraction or otherwise appropriately amends the local revenue law, the territorial tax becomes in effect a fixed supplement to the federal—a tail on a kite guided from Washington, but a tail unable to affect the upward or downward movements of the kite.

*Constitutional Issues*

A federally-based state income tax is not a recent innovation.[9] The New York statute adopting as the general basis of its corporate income tax net income as reported to the federal government was enacted in 1917. A court test of its legality showed the undesirability of a vague adoption by reference (income being defined to be "presumably same as entire net income which the taxpayer is required to report to the U. S. treasury department, except . . . ."), but raised no doubts of the constitutionality of the state tax.[10]

In the 1920's, however, when South Carolina and Georgia enacted personal net income taxes computed at one-third of the individual's federal income tax liability, a basic constitutional question emerged. South Carolina's tax, passed in 1922, levied a tax computed in terms of the federal revenue act of 1921. The act was challenged on the grounds that incorporation by reference of the provisions of federal statute constituted an improper delegation of the state legislative power to Congress, but the court held this not to be so. In its decision affirming the constitutionality of the tax, the court stressed the fact that provisions of the revenue act were not adopted prospectively.[11]

The same decision was reached when a similar income tax law was enacted by Georgia in 1929. This time the statute was somewhat ambiguous; it could have been argued either that only the federal statute in being was adopted by reference, or that prospective amendments in the statute were also incorporated. The court adopted the first interpretation and, in upholding the act, strongly implied that the other interpretation would have rendered the law uncon-

[8] Again, it may be pertinent to note that the law necessarily provides for independent calculation of the tax in those cases, outside the scope of this discussion, where the taxpayer derives some income from sources not taxable by Alaska.

[9] Abroad, Australia employed fundamentally the same approach prior to World War II, when the federal government and states were evolving uniform income tax provisions—other than exemptions and rates—and were eliminating duplications in administrations. See Harold M. Groves, "Taxation in Australia and New Zealand," *National Tax Journal*, Vol. II, No. 1, March 1949, pp. 1-11, and *Federal, State, and Local Government Fiscal Relations*, Senate Doc. No. 69, 78th Cong., 1st Sess., 1943, pp. 111-12, 418-20. Japan's "inhabitant's tax" is, in part, levied by the prefecture and locality as a fraction of the individual's national income tax. (Report on *Japanese Taxation by the Shoup Mission*, GHQ, Supreme Commander for the Allied Powers, Tokyo: September, 1949, Vol. II, Chapter 11.)

[10] *People ex rel. Standard Oil Co. of New York* v. *Law et al.* 237 N.Y. 142, 142 N.E. 446 (1923). The court might have cited another contemporaneous use by a neighboring state of a federal tax statute. Between 1921 and 1927 Connecticut imposed an amusement tax levied as a fraction (50 per cent) of the federal amusement tax. The July 1947 mimeographed study of the U. S. Treasury on *Federal-State Tax Coordination* notes (pp. 25-26) that Connecticut adopted an independently-computed tax after the federal levy had been successively reduced in 1924, 1926, and 1928.

[11] *Santee Mills* v. *Query*, 122 S.C. 158, 115 S.E. 202 (1922).

stitutional.[12]

Such was the attitude of the three courts that had considered the question by the close of the 1920's: state income taxes on corporations might adopt current or prospective federal definitions of taxable income, but personal income taxes could be based, at the utmost only on the existing federal statutes. During the 1930's and 1940's incorporation by reference of federal laws, rules, and regulations had become a more familiar ingredient of state legislation. In the field of taxation, inheritance and estate levies were geared to the federal basic estate tax to take advantage of the 80 per cent credit provision; similarly state unemployment benefit laws were explicitly based on the federal Social Security Act which provided 90 per cent credits on payroll taxes to employers. Furthermore, in areas where compliance with federal requirements was necessary in order to insure receipt of grants-in-aid—such as public welfare and public housing—and in other areas where the federal government had taken the lead in establishing minimum standards or nationally applicable definitions—such as pure food and drugs, labor laws, and veterans' programs—adoption by reference of definitions established by federal laws and regulations had become commonplace.

This developing pattern of state legislation by reference was recognized by the court in the first—and to date only—test of the constitutionality of a state personal net income tax based without option by the taxpayer upon the amount of his tax liability as computed under the Internal Revenue Code, and as it is amended over time. The test came in the case of the *Alaska Steamship Co.* v. *Mullaney*,[13] when the validity of the territorial 10 per-cent-of-federal tax was challenged. The federal circuit court of appeals was faced only with the task of determining the validity of adopting provisions of the existing federal code, since at the time litigation began the federal income tax law was unchanged from the way it had read on enactment of the Alaska law in 1949. However, the court went out of its way to state in strong *obiter dicta* that the territorial law would have been equally valid even if the pertinent federal provisions had been amended.

It can no longer be assumed, then, that prospective incorporation by state law of congressional amendments is unconstitutional.[14] On the contrary, the assumption of constitutionality would seem more in keeping with the Alaska Steamship Co. case and the recognition by the courts of the increasing depend-

[12] *Featherstone* v. *Norman*, 153 S.E. 58. See also dictum in *Commonwealth* v. *Warner Bros. Theaters, Inc.*, 345 Pa. 270, 27 Atl. 2d 62. (Both South Carolina and Georgia subsequently repealed these taxes by reference. Correspondence with senior members of their tax commissions indicates that the taxes became increasingly awkward to administer as they increasingly came to refer to obsolete provisions of the federal tax law.)

[13] 180 F. 2d 805 (1950). *Certiorari* was denied by the United States Supreme Court.

[14] It is possible to find several cases where adoption by state law of prospective changes in federal law was held invalid—and several others contrariwise. (See 79 Law Edition 474, 133 A.L.R. 401, 166 A.L.R. 516, and 147 A.L.R. 467).

The attorneys-general of two states apparently found some agreement on this question in the area of income taxation, according to the *Tax Administrators News*. The November 1953 issue (p. 128) and the November 1954 issue (p. 127) noted that the governments of Pennsylvania and Kansas had been advised that a statute based on the federal income tax, now or as amended, would not be contrary to the state constitution. The Pennsylvania attorney-general, however, expressed the opinion that the Alaska-type of fractional tax would not be valid in Pennsylvania.

ence of the states upon federal legislation. In any event, the cautious legislative drafter would provide that the provisions of the existing Internal Revenue Code would apply, should the *dicta* of the Alaska Steamship Co. decision with respect to prospective amendments be reversed, thus insuring a continuance of tax revenues until the state law could be amended to incorporate desired changes already made in the Internal Revenue Code.

### *Effects on Tax Administration*

From the viewpoint of the states, the chief advantage of a federally-based income tax would be an improvement in tax administration and the achievement of economies made possible by use of the national machinery for collection and enforcement of the federal income tax. How large the economies can be depends, of course, on the closeness with which the state tax law is made to conform with the federal tax law. The extreme case is that of Alaska. Its adoption of a tax measured by 10 per cent of the federal tax, using the Internal Revenue Code as the source of all pertinent definitions and rules, makes it possible to employ the entire federal apparatus; normally, to determine tax liability to Alaska, the decimal point on the bottom of the federal income tax return need only be shifted one place to the left.

Without going as far along the road toward integration of state with federal tax laws as has Alaska, substantial reductions in the administrative burden of enforcing state income tax laws can be anticipated by adopting the central core of the Internal Revenue Code. Simplification of the tax return itself, introduction of tax withholding and quarterly payments of self-employed persons, ready checking of state against federal income tax returns,[15] all can be more easily achieved if the state definition of adjusted gross income is made to conform substantially with that of the Internal Revenue Code, even if the state law retains an independent treatment of capital gains (as in Vermont), of income-splitting (as in Kentucky), or of exemptions or rates. Furthermore, adoption of rules and regulations relating to incorporated provisions of the code would provide a body of printed and easily-available interpretations of tax law, an interpretation now not well undertaken by many states. While one would not argue for the infallibility of federal rules and regulations, they are as likely to be equitable as those developed by a state tax commission and much more likely to be consistent and available.

Utopian imagination pictures the close co-operation, even integration, of federal and state tax field staffs within a state, giving both jurisdictions a closer study of the taxpayers' books, rather than two shorter glances by either. With necessary checks on the continuing efficiency and probity of the federal field staff, there seems no strong reason for not placing the joint task of auditing both federal and state income taxes under the Bureau of Internal Revenue,

[15] Checking of federal returns for their own income tax purposes has been used by many states. See "Exchange of Information for Purposes of Federal, State, and Local Tax Administration," *National Tax Journal*, Vol. II, No. 2, June 1949, p. 156. This article, in discussing the co-ordination of federal and state auditing, states: "The idea of coordinated effort is particularly attractive with respect to the income tax field, where there is a common tax base for both Federal and state levies. Thus far, the most successful efforts to that end have been in connection with the exchange of information. . . . A variety of problems and practical difficulties need to be resolved before large-scale coordination of audit work becomes feasible."

the costs to be shared with the state government. State tax commissions would still have to handle the numerous cases involving income apportionment between sources taxable and not taxable by the state, but these are the exceptional ones and many, such as those involving interest on United States bonds, can be disposed of quite routinely.

Income taxes, because of the large number of variables which must be taken into account, are inherently expensive to administer. A sharing of costs between the federal and state governments under a joint administration might reduce these costs significantly, or, alternatively, permit a tighter enforcement with consequent increases in revenues.

### *Effects on Taxpayers*

Taxpayers, as a group, may suffer from the adoption of a federally-based income tax by paying more taxes, under any given set of rates and exemptions, than under a state income tax of traditional structure, both because of the greater ease of policing evasion and the revenue stimulant supplied from source collection.[16] They would stand to gain psychically, however, from an easier compliance with the state income tax law. Kentucky, for example, has adopted a postcard-size return which requires only sixteen entries for the complete computation of tax liability, tax due, and of any refund: the only arithmetical steps required are addition and subtraction. The short form used by Utah is an IBM card providing for six entries of numbers and ten information items, many answerable simply by " yes " or " no ".

For a small segment of our population, it makes an important difference whether the taxing state adopts the arbitrary rules of the federal government—establishing the maximum of deductible contributions, medical expenses, baby-sitting costs, and so forth—or adopts arbitrary rules of its own. For most form-fillers, however, the differences between the two sets of rules are obscure, haphazard, and unimportant.

### *Fiscal Effects*

Fiscal advantages of federally-based state income taxes are demonstrable. Adoption of a single standard for defining and taxing income would decrease the lack of tax uniformity among the states. Capital gains, for example, are treated in at least a half-dozen ways by the 37 states taxing income; their treatment ranges from complete exemption to taxation as ordinary income, with differing methods of special taxation lying between. Depletion allowances vary among the oil producing states; depreciation, permitted carry-backs and carry-forwards of losses, and other rules by which business income is determined vary among the entire group of states levying income taxes.

Greater uniformity would accrue regardless of how great an area of discretion each state retained with respect to rates, exemptions, and income splitting. To the extent that the states agreed to follow closely in the wake of federal income tax adjustments, harmony would be increased between federal and state fiscal policy, a synchronization

[16] John F. Sly estimates that an increase in revenues approximating 5 per cent to 10 per cent might be expected from adoption of a program of collection at the source. (*Tax Policies in Utah*, 1954, p. 164.)

of the kind advocated by Hansen[17] as a means of arriving at a cohesive, rather than schizophrenic, fiscal program for a federal form of government.

Synchronization is most forcefully achieved under the fraction-of-federal tax adopted by Alaska. Every change in the level of federal income taxation is automatically transmitted to the state income tax in the same proportion. Were all states now levying personal and corporate income taxes to follow Alaska's example, a significant extension would be given to the regulatory power exerted over the national economy by the Congress in changing effective rates of the federal income tax.[18]

Even the widespread use of the Vermont approach, which adopts the federal tax *base* rather than the amount of federal *tax* in calculating the state income tax, would have a similar, if far weaker, tendency, since the effective level of federal income taxes is partially set by changing the rules for determining the amount of taxable income.

This tendency to make state policy conform to federal income tax policy may appeal to those like Hansen, who are persuaded that the Great Depression demonstrated the necessity of making state and local governments pull in the same direction as the national government. At the same time it may repel those who are primarily interested in the financial well-being of an individual state, rather than the national economy. By taking seats in a train driven by the federal government, the states must occasionally be carried around curves they had not foreseen; while retaining the right to get off at any station, they may be transported for some time in an unwanted direction. So, unanticipated cuts in the federal income tax may bring unbudgeted reductions in state revenues —certainly under the Alaska kind of tax, and probably under the Vermont type—if the cut is effected by reducing the level of taxable income. It is true that corrective measures may be taken at any time by the state legislatures, but so long as less than a third meet in annual sessions, the risk of unplanned changes in tax yields is substantial. Even in legislative years, special sessions might be required to offset changes made by the Congress, since national tax laws (which, to be sure, seldom make drastic changes in the level of federal income taxes) frequently are passed late in the year, after the state legislatures have adjourned *sine die*.

Adoption by many states of a federally-based income tax would tend, as it strengthens the fiscal consequences of federal income tax policy decisions, to concentrate in Washington pressures for changing the rules and rates which determine tax burdens and the resulting counterpressures. The oil industry, for example, rather than dealing with the independently, and variously, determined methods for allowing depletion deductions set by California, Oklahoma, Louisiana and other oil-producing states, would center in the national capital its efforts to retain or improve its position. Lobbyists for co-operatives increasingly would shift their attentions from the state legislatures to the Congress, and so would other agents of groups with defined interests in the particulars of

[17] Alvin H. Hansen and Harvey S. Perloff, *State and Local Finance in the National Economy*, (New York: W. W. Norton & Co., Inc., 1944).

[18] The 37 states and territories which now impose net income taxes have populations comprising some two-thirds of the national total; their combined populations received approximately 65 per cent of all personal income in 1953.

tax law. In addition to removing a portion of the lobbying pressure from typically understaffed state assemblies, the states might shift to Congress other unwanted concomitants of power over the definition of the tax base. Every few years, legislative bodies in those states imposing income taxes are required to review and amend these increasingly complicated statutes; the revision is usually controverted and must be accomplished within the short term of a biennial session. Perhaps legislative process in the area of taxation might be better executed at the state level by delegating to Congress the power to set depreciation formulas, accounting methods, and rules on wash sales, the state bodies concentrating on policy fundamentals which most forcefully determine the total income tax burden and its distribution—exemptions, deductibility of federal income taxes, income splitting, and rates.

Such concentration of lobbying efforts in Washington might add to the pressures on Congress to reduce the scope or force of the income tax law on particular groups. The Congress, however, with its more adequate staffing and lengthier sessions, and mindful of the heavy reliance of the national government on the income tax, should be in a better position to withstand continued attrition of the tax base than is the state legislature.

*Summary*

State (and territorial) governments do not appear ready to relinquish the income tax field, one of the major areas of intergovernmental fiscal overlapping, despite the logic of the case for sharing with the states a unique federal income tax. Several states, however, have taken steps to reduce the administrative aspects of this overlapping by adopting the federal tax base, or by imposing a tax measured as a fraction of the federal levy. Such federally-based taxes offer a way of achieving more uniform taxation of income in the various parts of the United States, a reduction in the over-all costs of income tax administration and compliance, a means of conforming state to federal fiscal policy, and a device for relieving state legislatures of the responsibility for setting the details of income tax law. The states might then concentrate their attention on the primary determinants of effective tax rates. Conversely, adoption of a federally-based income tax reduces, but need not abolish, state control over the level of its tax revenues.

# THE REPORT OF THE COMMISSION ON INTER-GOVERNMENTAL RELATIONS *

JAMES A. MAXWELL †

APPOINTMENT of a Commission to study the means of achieving a sounder relationship between federal, state, and local government was recommended to Congress by President Eisenhower on March 30, 1953. By Public Law 109 the 83rd Congress authorized establishment of a bipartisan Commission of twenty-five members, fifteen to be appointed by the President, five by the President of the Senate, and five by the Speaker of the House of Representatives. The Commission had the *general* task of appraising " the proper role of the Federal Government in relation to the States and their political subdivisions " in order that governmental functions be properly allocated and that fiscal relations be such that each level of government may discharge " the functions which belong within its jurisdiction in a sound and effective manner." As a *specific* task growing out of this general task, the Commission was to investigate all aspects of federal grants-in-aid.

The chairman of the Commission was Meyer Kestnbaum,[1] president of Hart, Schaffner and Marx and chairman of the Committee for Economic Development. Of the fourteen other members appointed by President Eisenhower, six were or had been state governors (Alfred E. Driscoll, John S. Battle, Sam H. Jones, Val Peterson, Allan Shivers, Dan Thornton), three were from the executive branch of the federal government (Oveta Culp Hobby, Marion B. Folsom, and Alice K. Leopold), one was a state civil servant (John E. Burton), one was a political scientist (William Anderson), one an economist (Clark Kerr), one a management expert (Lawrence A. Appley), and one an ex-mayor (Charles Henderson).

The *Report* of 280 pages records 174 dissents, qualifying statements, and exceptions. While many of these are minor, some indicate a real conflict of philosophy among the members. As dissenters Senators Morse and Humphrey lead all the rest with twenty-six and twenty-five. For Senator Morse this was the more remarkable since he did not become a member of the Com-

* The *Commission on Intergovernmental Relations,* A Report to the President for Transmittal to the Congress (Washington: June 1955). In addition fifteen reports of study committees of the Commission have been published.

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[1] The first chairman was Clarence E. Manion, who resigned under pressure from the White House on February 17, 1954.

mission until March 31, 1955, less than three months before it reported. Besides his specific dissents in the body of the *Report*, Senator Morse filed a "general dissent," most of which is a philosophical expression of his views concerning "federal sovereignty." The other members from the legislative branch of the federal government recorded very few dissents. Of the governors Dan Thornton and Alfred Driscoll, with twenty and seventeen dissents, headed the list. Mr. Burton dissented thirteen times, and Dr. Anderson eight times.

The *Report* falls into two pieces. Part I deals with the nature of American federalism and with the features which should be strengthened in order to make it more effective. Despite some conflicts of opinion, the members generally agreed on fundamentals, "including the principles for dividing labor among levels of government and the criteria for testing the soundness of grant-aided programs."[2] In Part II, where the Commission examined major grant programs, differences of opinion multiplied. Many members, imprisoned by what was, were unable to apply agreed principles with unanimity.

### PART I

Part I provides an eloquent affirmation of the vitality of our federal system. The Commission finds no ground either for the belief that American federalism has been endangered by an undue expansion of national power, or for the contrary opinion that more centralization is required to meet present problems. The large slice of national income now absorbed by the federal government is, the Commission finds, attributable to war and the recurring threat of war. With respect to peacetime functions the state and local governments now carry directly more than two-thirds of the fiscal burden. Despite a growing federal concern for social security and economic stabilization, the role of the state and local governments remains large.

The political and constitutional premises of American federalism, indeed, have altered. A half century ago a reasonably distinct boundary existed, in terms of constitutional power, between federal and state functions; the Supreme Court was "the final arbiter of the system." These premises are no longer valid. The Supreme Court now refuses to review issues of economic policy, and it places "no discernible judicial limits on the amounts or purposes of Federal spending."[3] Instead, it accepts the concept of co-operative federalism. No longer is it a question of what level of government has the authority to act, but rather what level ought to act, and how. The decisions are chiefly legislative; and political, economic and administrative criteria are relevant.

In assigning the states an important role in American federalism, the Commission desires very much modernization of state constitutions and legislative procedures. The severe limitations imposed by many states on their own ac-

[2] *Report*, p. 146. Hereafter page references to the Commission's Report are also cited at appropriate points in the text.

[3] *Ibid.*, pp. 28-29. All of the six ex-governors, and four other commissioners, regret that the Court has done what it has done in this respect, and five ex-governors and Mr. Burton express the hope that the Supreme Court will reconsider its position so as to "redefine constitutional restrictions on the use of the National expenditure power consonant with the principles of our federal systems." (p. 60.)

tion and that of their local governments should be removed. In numerous states an urgent problem of reapportionment of legislative representation should be faced. Urban areas, under-represented in state legislatures, have begun to bypass the states and to request national action concerning problems of housing, urban development, and airports. The Commission declares also that, in many states, the power of the governor should be strengthened; he cannot function effectively when department heads operate outside executive control. And in other states reform of local government is overdue. A major feature of this reform should be the broadening of home rule by giving local units more freedom to make their own decisions.

In a healthy federalism the main national responsibilities are obvious—foreign relations, money and credit, interstate commerce, countercyclical fiscal policies. The federal government, moreover, has a *financial* role to play in many service functions which belong primarily to the states.

Convinced that many governmental functions have intergovernmental effects, the Commission proposes creation of a new staff agency in the executive branch of the federal government with the duty of giving over-all attention to problems of interlevel relationships. This intriguing proposal flows naturally from a belief in co-operative federalism. Indeed, if working relationships among governments are to be harmonized, the Commission might well have suggested establishment of agencies at the state, as well as the federal, level.

In Chapters 4 and 5 of the *Report* the Commission considers the financial aspects of the federal system. It finds three problems: (1) imbalance between the national government and the states, (2) imbalance among the states, (3) imbalance within individual states. The last of these is dismissed with the statement that "the solution of the revenue problems of local governments lies largely in strengthening the property tax and in greater assistance from State revenues" (p. 103). Discussion of the first and second problems tends to merge, with most attention given to federal grants-in-aid.

The Commission comes out strongly for continuance and extension of conditional grants in support of specific purposes. It wants the controls and guidance which such grants provide, and it wants the grants confined "to fairly small segments of broad activities" (p. 133). Equalizing factors should be used both in the allocation formula and matching requirement. A reader gains the impression that the Commission refuses to face up to the problem of financial imbalance among the states. Certainly it never appraises the *over-all* equalizing effect of the numerous specific grants. Observing that, in recent years, economic inequality among the states, measured by per capita income, has diminished, the Commission hopefully looks forward to further narrowing. Somehow, by inadvertence, the problem of financial imbalance is to vanish.

The Commission perceives, however, that an unconditional grant would be a neat device both to improve the overall financial situation of the states *vis-à-vis* the federal government, and to relieve imbalance among the states. But it then retreats from this logic.[4] It

[4] The *Report* appears to draw a distinction between a "comprehensive subvention for general governmental purposes" (p. 115) and a "subsidy" (p.

(See next page)

asserts that (a) such a grant would impair state fiscal autonomy, (b) equalization for its own sake would be undesirable, and (c) for political reasons, the grant could not be limited to needy states.

The bald statement that an unconditional grant would impair state fiscal autonomy carries no conviction. In the Canadian and Australian federations a precisely opposite argument has been accepted: that specific conditional grants which, by their nature, carry detailed conditions, will impair autonomy, whereas general grants which, by their nature, are unconditional, will not.

Equalization " for its own sake " in a grant might be " undesirable," that is, it might be pushed to an extreme. But this is true also of equalizing formulas in specific grants. *How much* equalization will always be a question to be settled by economic, administrative, and political considerations; it poses an aggregative problem which should be faced in the use of existing grants.

On political grounds the Commission appears to believe that equalization will not be carried far enough, because a general grant could not be limited to the needy states. " Since taxpayers in all States would supply the funds to be distributed by the National Government, each State would believe itself entitled to a share " (p. 115). Again, this is unconvincing. In Australia and Canada general unconditional grants *have* been limited. Taxpayers in rich states, and their representatives in Congress, might be restrained in their pressure by the reflection that a disproportionate share of the revenue for an equalizing grant would be drawn from them by a federal tax system which is progressive.[5]

Since I happen to be sympathetic to specific grants and dubious of the merits of unconditional ones, I am the more disappointed with the vague arguments offered by the Commission. Specific grants, confined " to fairly small segments of broad activities " (p. 133), have advantages. They guide state and local effort in directions suitable to the federal government; they provide controls against misuse of funds. But the Commission perceives very imperfectly that these advantages are in conflict with its expressed philosophy which favors state-local governmental decisions. At one point the Commission states that national conditions should " be limited to those needed to attain the objective of the grant," that " legislative requirements should be written clearly and precisely," that " administrative regulations should be drafted only after thorough consultation with State executives . . ." (p. 138). Surely these trite generalizations miss the point that federal conditions aimed at limited objectives *must* be restrictive of state-local decisions.

The Commission dismisses the charge that conditional grants may distort State budgets. " It is questionable," it declares, " whether any State, today, spends more of its own funds on major activities supported by grants-in-aid than it would were there no Federal support of these activities " (p. 129).

121). I am unable to appreciate the distinction and, in my exposition I have regarded both as unconditional grants.

[5] The Commission elsewhere seems to believe that a specific grant *can* be limited to needy states, since it approves of such a grant for construction of school facilities (p. 194). The logic of this belief is not apparent.

This statement, while equivocal, seems inaccurate and misleading. *A Survey Report on the Impact of Federal Grants-in-Aid on the Structure and Functions of State and Local Governments* informed the Commission " that Federal grants have produced shifts in State policies. In some instances, services were introduced which would not have been undertaken without Federal aid. In other cases, it was stated that the functions were begun sooner and were done more extensively than would otherwise have been the case." [6] It found also that, at least in poor states, the claims of unaided services tend to get passed over. The most obvious instance of distortion has been in the field of public assistance where the category of general relief receives no federal grants. The rich states, which may not have distorted their expenditure, spend two or three times as much for old age assistance as for general relief; the poor states, however, spend seventy-five to one hundred times as much.

Four other problems of intergovernmental financial relations are mentioned by the Commission. These are: (a) overlapping taxes, (b) tax co-ordination, (c) payments in lieu of taxes, and (d) tax immunities. Congress should, the Commission observes, consider problems of tax overlapping when tax reduction is possible; Congress and state legislatures should work toward tax co-ordination. With respect to the two other issues, the Commission is quite definite. The federal government should " inaugurate a broad system of payments in lieu of property taxes to State and local governments " (p. 108), confining its payments to properties recently acquired; exemption of interest on state and local bonds from federal taxation should be continued because removal " would adversely affect the capabilities of States and their political subdivisions at a time when they are already hard-pressed to meet emerging fiscal responsibilities " (p. 109). An indirect subsidy, allocated to governments in proportion to their borrowing, is to be continued without limitation despite faults which have impressed the majority of disinterested observers for decades.

One unusual proposal—a simultaneous reduction of grants and of certain federal taxes—was rejected by the Commission, although four members thought it had merit. Details concerning what taxes and what grants were in question are not provided, but in principle the proposal is both plausible and attractive. While reduction of federal taxes would benefit the richer states disproportionately, this could be offset by reduction in the amount of grants going to the richer states, coupled with equalization formulas which favor the poorer states. Against this scheme the Commission argues unconvincingly that reduction of grants to the high income states might impair their incentive to support grant programs.

PART II

Part II of the *Report* has twelve chapters dealing with " fields that involve both a significant degree of intergovernmental relationship and sizable financial assistance from the National Government to the States or their subdivisions." (p. 145)

### *Agriculture*

The present numerous grant programs are recommended for continuance with

[6] p. 12.

minor modifications, even though most of the grants are old, unimportant in amount, and have grown hodgepodge by accretion over many years.[7] Conversion of two conservation programs—the soil conservation services and the soil conservation payments—to a grant basis is advised in order that the states and local governments may assume a greater responsibility. Numerous dissents are recorded against both moves.

*Civil Aviation*

The small grants are recommended for continuance, and probable increase, with the modification that creation of regional airport authorities be encouraged.

*Civil Defense and Urban Vulnerability*

The Commission bluntly questions the declaration by Congress in 1950 that responsibility for civil defense rests primarily on the state and local governments. Primary responsibility should, it declares, be federal, and civil defense relationships should not, as at present, be mainly through the states. Instead, " direct relationships should be authorized between the National Government and critical target cities and their support areas " (p. 183).

*Education*

Broadly, the position taken by the Commission is that national action should be " confined to research, advisory, and clearing house functions such as those currently performed by the Office of Education " (p. 188). It does *not* favor federal grants for the support of elementary and secondary education. The state and local governments do not require the stimulus of grants because they are already fully cognizant of what is needed and have the financial capacity to meet their educational requirements. Federal leadership in setting standards would be undesirable. No basis for grants, therefore, exists.

These firm views are surprising. Congress on several occasions has come close to providing grants for support of primary and secondary education. The best known bill was sponsored by the late Senator Robert A. Taft. By it the grants were to go primarily to the low-income states on the ground that they had demonstrated a genuine financial need. This need the Commission now rejects, relying on the conclusion of its study committee that " the State and local governments can, if they will, afford adequate educational services " (p. 192). It admits that actual educational provision of facilities and services is now often inadequate, but federal grants are not the *only* remedy. If the states would reorganize their school systems so as to eliminate many districts which are too small and too poor, if they would provide more effective equalization of state aid to enable poorer districts to carry a minimum school program, if they would remove restrictions on taxing and borrowing powers—then federal aid would be unnecessary. Might not federal grants stimulate achievement of some of these " ifs "? No explicit verdict is passed by the Commission, but the implication is that this would be an application of un-

[7] The Study Committee Report on *Federal Aid to Agriculture* illustrates strongly the grip exercised by schemes now in operation. For example, the committee concedes that the grants to the land-grant colleges achieved their purposes years ago, and that they bear " no particular relationship to the need of the various states and their respective land-grant institutions." Yet continuance is recommended (p. 10).

desirable federal controls.

The study committee, upon whose findings the Commission leaned, was composed of fifteen persons, four of whom refused to sign the report and one who signed after indicating major dissents. The committee report seems to abound in semantic confusions, false dichotomies, and extreme generalizations.

The financial ability of state and local governments, the committee declares, "should not be measured in terms of revenues actually available, but in terms of basic resources upon which the unit of government may draw, if it is willing to do so" (p. 7). As an academic definition, this is plausible, but surely it is out of place in a report dealing with urgent current problems. The self-imposed limitations of state and local governments on borrowing, taxing, spending, are firmly rooted; they are very relevant to what can be done by these governments in the foreseeable future.

A false dichotomy which appears frequently in the study report is illustrated by the following quotations: "Federal action could bring about universal educational opportunity only if grants-in-aid were conditioned upon control of distribution of both State and Federal funds."[8] Here and elsewhere a contrast is drawn between a system of education which is chiefly federal and one which is almost entirely state-local. The former has never been seriously proposed and to associate it with some modest scheme of federal grants is fantasy.[9]

The study committee makes a number of misleading comparisons and generalizations concerning taxation and grants. Much impressed with the redistribution in income, state by state, being accomplished by the federal tax system, it contrasts this process favorably with the redistribution accomplished by federal grants. One statement is as follows:

> In 1953, Federal tax incidence varied from $344 million in Mississippi to $9.6 billion in New York. That equalled 19.4 percent of income payments to individuals in Mississippi, 30.6 percent of income payments to individuals in New York. The disparity in income between the two States was thus reduced by 11.2 percent. Federal grants-in-aid equalled, in 1953, 0.64 percent of individual income payments in New York, 2.39 percent in Mississippi; they narrowed the spread in fiscal capacity between the two States by 1.75 percent of income payments. *In other words, the progressive tax system was six times as effective in reducing the disparity in fiscal capacity between New York and Mississippi as all Federal grants-in-aid together.*[10]

The committee concludes that "economic disparities among states can be reduced more effectively by taking less money out of the low-income states rather than by taking money out and returning part of it as grants-in-aid." (p. 78) But if federal taxes are reduced so as to give relative gains to the low-income states, progression would

[8] A Study Committee Report on *Federal Responsibility in the Field of Education*, submitted to the Commission on Intergovernmental Relations (June, 1955), p. 94. Other examples may be found on pp. 77 and 95.

[9] *Ibid.* The report admits that "the lagging states should be given technical assistance by the Federal Government, and they should be encouraged by example and guidance" (p. 95). But grants are *not* an acceptable method.

[10] *Ibid.*, p. 78.

have to be made steeper. Surely this is startling doctrine. The committee should recognize that reduction of income disparities among the states is not an important objective either of the federal tax system or of federal grants.

How does the committee reach the conclusion that " research does not sustain the contention that Federal funds are essential to support the elementary and secondary school system "?[11] The committee does not deny that educational provision at present is unsatisfactory in many states, or that a national interest exists in provision of an " adequate " level of education. It recognizes the remarkable mobility of our population, so that, in 1950, almost one-quarter of all persons lived in a state other than the state of birth. It cites also certain present disparities. In 1952 disposable income (meaning income payments to individuals less federal individual income tax collections) was $6,727 per school child for the United States, with a range from $2,810 in Mississippi to $9,806 in Nevada.[12] The group of twelve states with the lowest disposable income per capita had only half the rate of high school graduates as the group of twelve with the highest. Teachers' salaries and qualifications are at a meager level in the poor states.

Is the inferior level of educational provision attributable to lack of financial effort? Not if the test is what the poorer states do in comparison with the richer. In 1952-53 current expenditure per pupil in average daily attendance was 3.49 per cent of " disposable " income for the United States, 3.38 per cent for the twelve richest states, and 4.16 per cent for the twelve poorest. The committee declared that " the low-income states make a moderately higher school effort than the high-income states." But surely this description of an effort 23 per cent greater is an understatement.

The state with the lowest expenditure ($101) per school child in 1952-53 was Mississippi. This was 3.59 per cent of its " disposable " income. An expenditure of $235 per school child, the average for the United States, would require 8.36 per cent of its " disposable " income. Nothing of the sort is feasible, but the figures serve to indicate that, even if school districting were ideal and if complete constitutional and statutory freedom with respect to school expenditure were achieved, Mississippi could not, in the foreseeable future, be expected to provide " adequate " education for its children.

One other consideration may serve to

11 *Ibid.*, p. 8. This statement is followed by the cliché that " all economic resources in the United States, all wealth and income, are within the borders of the 48 States and subject to their taxing powers. There is no magic in the United States Treasury. Federal support for education can come, in the last analysis, only from the same basic resources which are available to States and local governments." Responsible people should ask themselves: if, somehow, the right to tax income were taken from the federal government and assigned to local governments, would the local governments be able to raise the aggregate amount now collected by the federal government?

12 Instead of deducting federal individual income taxes from income payments to individuals, the logical step would have been to deduct all federal taxes according to incidence state by state. Calculation of this incidence is a very hypothetical business. On the other hand, deduction of the tax which falls most heavily on the richer states, and neglect of the incidence of regressive federal taxes, make the " disposable " incomes of the richer states relatively smaller than they are in comparison with those of the poorer states. It should be noted also that the study committee, in its argument (presented above) concerning the redistributive effect of federal taxes, used aggregate figures of incidence.

explain the optimism of the study report. "Social and economic forces," it declared, "have greatly reduced the disparity in fiscal ability among states over the last 15 years."[13] Per capita income of the 12 low-income states rose 96 per cent between 1940-53, whereas that of the 12 high-income states rose only 37 per cent. The swing may continue and, in such case, the poor states will become more and more able to finance education. On the other hand, the trend may not continue, and even if it did large disparities will long remain. A good many citizens will believe that provision of an adequate level of educational training in the poor states should not wait upon the hypothetical and long-run fulfillment of recent trends.

Despite the dissatisfaction expressed here with the arguments of the Commission and its study committee, the serious problems raised by federal grants to primary and secondary education should not be underrated. In many states school district reorganization, overhaul of the system of school finance in the direction of equalization, establishment of objective standards of qualification for teachers, are overdue. These are ticklish tasks and to provide federal grants before reform might entrench inefficient practices. The conclusion seems indicated that the grants should carry conditions which will stimulate reform. Progress should not wait until disputants who are concerned with delineation of the proper spheres of action for each level of government have resolved all the issues.[14]

The Commission also made recommendations concerning three other types of educational grants. While opposed to a general program of grants for construction of school facilities, it is willing to give temporary grants to states which demonstrate that they do not have sufficient tax resources to do the job themselves. It recommends that grants to vocational education be limited "to subjects vested with a clear and special national interest" (p. 191), without specifying what these are. Cash grants to the school lunch program should be eliminated "after a reasonable period of time," but commodity donations should be continued "as long as these stocks continue to be acquired and held as surplus by the National Government" (p. 189). If, at some later date, the volume of surplus commodities decreases or ceases, how is the program to adjust? Are local governments to purchase the commodities required, or is the program to be curtailed? Neither alternative is satisfactory. Surely it is unwise federal policy to subject a grant program to the vicissitudes of a completely unrelated program designed to stabilize certain agricultural prices.

### *Employment Security*

In this area one issue which has continually disturbed federal-state relations relates to the 100 per cent grants made to cover the administrative cost of unemployment insurance. Inevitably these grants have brought imposition of extensive administrative controls in order to prevent the waste of federal

[13] A Study Committee Report on *Federal Responsibility in the Field of Education*, p. 57.

[14] Another fact, which explains the negative position of the Commission and has hindered Congressional decision, is the large enrollment (13.5 per cent of public school enrollment) in nonpublic schools. Inclusion of this enrollment in a scheme is probably unconstitutional; exclusion raises thorny religious issues.

money. Collision with state officials has, therefore, been frequent. State opinion has been further exacerbated because the federal tax of 0.3 per cent has provided an aggregate sum much in excess of the aggregate paid as grants for administration. The Reed Act (Public Law 567, 83rd Congress, 2d sess.), which was passed to allay state criticism, provides that surplus collections be assigned to a loan fund, from which states may borrow if their reserves are in danger of insolvency, until a maximum of $200 million is achieved. Thereafter the surplus is to be distributed to the states according to the amount of covered payrolls.

The study committee on Unemployment Compensation and Employment Service considered a number of modifications. A bare majority—six out of eleven members—favored a 99 per cent tax offset. This would, in effect, abolish the present federal grant and permit the states to collect 99 per cent of the employer tax. Such a move would leave a considerable number of states—20 in 1953—with administrative expenses in excess of the additional collections made by them. To these "high-cost" states the majority would give grants to make up the deficiency. How was the federal interest in sound administration of employment security to be protected? By having the Federal Bureau of Employment Security submit to each state a budget which it considered adequate for efficient administration. "Substantial departure from it on the low side" might be the basis for a finding of nonconformity with the federal law.[15] A minority of the study committee favored retention of the present system, and this proved to be the view of the majority of the Commission. But several dissenting opinions were expressed. At one extreme, Senators Humphrey and Morse, Dr. Anderson, and Governor Driscoll preferred a nationwide system of unemployment insurance, supported and administered by the federal government. At the other extreme, Governor Shivers endorsed the views of the majority of the study committee.

The majority of the Commission, while favoring retention of 100 per cent grants, made a number of recommendations for change. It would shrink the area of administrative controls by providing "that where a State's auditing, purchasing, and other fiscal controls are determined by the Secretary of Labor to afford adequate protection of the national interest in the proper expenditure of Federal funds under the employment security program, these controls be accepted as a substitute for the type of controls now exercised by the Department" (p. 203). This is a sensible proposal. In states with high standards elaborate federal controls are duplicative and annoying. The majority would require the Secretary of Labor to consult the states before adopting regulations "materially affecting the program of the States," and it would provide "a hearing panel" to advise the Secretary "on conformity and compliance cases before he renders a decision" (p. 205). The merit of these recommendations is doubtful. Certainly they would make administrative procedure more time-consuming and bureaucratic than at present.

While favoring relaxation of administrative controls, the Commission leans

[15] A Study Committee Report on *Unemployment Compensation and Employment Service*, submitted to the Commission on Intergovernmental Relations, p. 7, p. 23.

toward strengthening the federal role with respect to the substantive program of unemployment insurance. Federal recommendations to the states concerning minimum standards of benefits should become the regular practice; Congress should authorize application of sanctions in order to prevent insolvency of a state fund; coverage should be extended to all firms employing one or more persons. These recommendations are couched in guarded language, but they do lean toward a stronger federal role.

With respect to the controversial issue of experience rating, the Commission, following the lead of its study committee, stands for *status quo*. It declares baldly that "experience rating is the best available device for making needed adjustments in revenues to the State unemployment fund without creating a serious problem of interstate competition and resulting pressure against adequate benefit protection" (p. 208). The alternative of permitting states to make flat-rate reductions for all employers on a uniform basis is rejected on the ground that it would create competition to attract industries to low-rate states. This charge, in the opinion of many observers, can more cogently be laid against experience rating. If states, before making flat-rate reductions, had to meet reasonable benefit standards, no undesirable competition would ensue. The Commission passes over without mention the perverse countercyclical effect of experience rating, a defect which reduces the value of unemployment insurance as a built-in stabilizer.

The issue of extension of coverage also split the study committee six to five with the majority favoring extension to employers of one or more employees. The Commission here went along with the majority, Governor Battle alone dissenting.

### *Highways*

The Commission makes no unusual recommendations here. It approves of some increase of federal aid channeled especially toward "highways of major importance to the national security" (p. 216); it wants "a reduction in the extent and degree of Federal supervision" of the grants; it favors a pay-as-you-go plan financed, "primarily from increased motor-fuel taxes" (p. 219); it wants repeal of the Hayden-Cartwright Act. Eight Commissioners urge that, instead of larger grants, the federal government repeal its gasoline tax and place responsibility for creating an adequate highway system upon the states.

### *Housing and Urban Renewal*

In this area of social legislation the predominant pattern of direct intergovernmental relations has been national-local, with the states on the sidelines. This the Commission regrets, and it makes modest recommendations to bring about larger state participation and responsibility.

### *Natural Disaster Relief*

In terms of expenditure the federal role here has been minor, and discussion is warranted only because the Commission makes an unusual series of recommendations: (1) The federal government should not give financial assistance until a state obligates itself to a share of the expenditures. (2) This share shall be "equal to at least one-fiftieth of 1 per cent of the 3-year average of total income payments of the

people in the State during the most recent years reported" (p. 236). (3) "The State itself as distinct from the local governments shall assume at least 25 percent of this qualifying obligation." (4) The federal grants should have variable-matching requirements "related to per capita income, with the amount of Federal financial assistance ranging from 75 percent for States with the lowest per capita incomes to 33 1/3 percent for States with the highest per capita incomes."

Altogether this is a remarkable scheme. The most unique feature is the requirement that states must put forth a specific fiscal effort as a condition of federal aid. The Commission, and its study committee, unhampered by the presence of an existing scheme, discarded the inhibitions which are so apparent whenever legislative commitments have been made.

*Welfare*

In this area federal grants for old age assistance, dependent children, the needy blind, and the permanently and totally disabled, amounted to $1,330 million in fiscal 1953, of which $899 million (68 per cent) were for old age assistance. The Commission recommends revision of the present grant formula for old age assistance in the direction of greater equalization. This is to be accomplished by use of variable-matching so that in the state with the highest income per capita the state-local share of allowable expenditure will be two-thirds, while in the state with the lowest it will be one-quarter.[16] The formulas for the other public welfare grants will be correspondingly altered. The Commission is aware that these changes would leave unaffected "the loose eligibility practices that are found in a few States," meaning that some states place on the old age assistance rolls a large percentage of persons over 65 years of age, while others exclude many by application of a means test. This is inequitable and it brings a heavy drain on the federal Treasury. But the Commission merely declares that, if the states do not reform their practices, "it might prove necessary to fix further limits on Federal financial participation" (p. 275). Here again is an unusual and misplaced display of confidence in the willingness and ability of the states to carry out painful operations.

Toward one other major issue concerning public assistance—what to do about general relief—the attitude of the Commission is *status quo.* General relief is to remain a state and local responsibility without help from federal grants. The Commission recognizes that the low-income states at present make very small payments for general relief, that the number of their recipients is disproportionately low, and that "a sustained depression" would throw a financial burden upon them beyond their strength. Federal intervention would follow. But this contingency is, apparently, to be faced when and if it develops. The Commission remarks hopefully that perhaps expansion of the social insurance programs will shrink the area of general relief.

The negative attitude of the Com-

[16] The Commission believes the formula should also be revised to provide that "the maximum State expenditure in which the National Government will participate [be] stated in terms of an average of all old-age assistance payments in the State, rather than in terms of the payment to an individual" (p. 273). The present system is administratively complex, and it tempts states to limit individual payments to the amount in which the federal government will share.

mission toward the problems of general relief is consistent with its negative attitude toward reform of eligibility practices for old age assistance. Federal grants for general relief on as loose a basis as they now are for old age assistance would be undesirable. But the opinion of this reviewer is that reform of the latter might well have been coupled with provision of the former.

The Commission failed, in important respects, to follow the advice of its committee on *Federal Aid to Welfare*. The majority of the committee (6 out of 11), impressed by the known defects of the existing system of categorical grants to public assistance, recommended substitution of a single closed grant to be used for all state-local welfare activities in place of separate open-end grants for specific categories of public assistance. In short, the majority proposed a closed block grant. A number of possible formulas are considered, all of which would take into account state *need* for welfare funds and also the fiscal *effort* of states to meet their welfare needs.[17] These would be genuine innovations. Not only would they provide a logical system of federal grants for welfare, but they could also contribute to economic stabilization. Undoubtedly this majority scheme raises a vast number of political obstacles, and a considerable number of technical problems which the Commission might have judged to be insuperable. Unfortunately the Commission does not even mention the recommendations of its study committee. Instead, as has been indicated above, it commits itself, in the main to retention of what is.[18]

### CONCLUSION

My dominant feeling concerning the *Report* is disappointment, despite a philosophic sympathy with the general principles which it expresses. For instance, I endorse the concept of cooperative federalism, especially as manifested by conditional grants, and I see no likelihood of a neat division of revenue sources, but rather a continuance of joint occupancy of important tax fields. What I do regret is the lack of boldness with which the principles have been applied. Instead of providing an overhaul of intergovernmental relations, the Commission has nibbled here and there, tending to be bound by *status quo*. In one instance, however, the Commission has been overbold and overoptimistic in drawing a conclusion. Asserting that many of the financial difficulties of state and local governments are self-imposed, the Commission avers that remedy lies in the hands of the states. But surely it is naive to be unaware that the thicket of constitutional and legislative restrictions which, in many states, impede governmental action, will yield only to political dynamite. To set aside any major problem of federal-state relations on the ground that it could be handled better after many states reform their governmental systems is evasion of responsibility.

The favor with which the Commission views conditional grants blinds it

[17] A Study Committee Report on *Federal Aid to Welfare*, submitted to The Commission on Intergovernmental Relations (June, 1955), Chapter 3.

[18] The *Report* has chapters dealing with Natural Resources and Conservation, Public Health, and Vocational Rehabilitation. Its recommendations about the first of these are designed to secure a more coordinated natural resources policy within the federal government, and between it and the states. With respect to the two latter areas it is fairly satisfied with the existing pattern.

to the desirability of framing and supervising them as a co-ordinated whole. If this were done, the difficulties which arise in the piecemeal operation of grants would be reduced. Certainly haphazard and piecemeal expansion of federal grants tends to aggravate the divisive elements in federalism. Congress, responsive to particular pressures, is likely to be oblivious to the over-all and aggregate aspects of grants, but a Commission on Intergovernmental Relations should correct this limited congressional vision.

The *Report* gives very little attention to intergovernmental tax relations, and the legislation which established the Commission did not specify this duty. In a chapter on "Financial Aspects of the American Federal System" brief attention is given to the problems, but the positive advice is vague and general: maintenance of a high-level economy, moderation in taxes and expenditures, achievement of greater tax co-ordination. A reader is not made aware of the powerful forces that lie behind tax conflicts and duplication. It is not to the interest of every state that certain tax conflicts be removed, and the implicit assumption of homogeneity of interest is an error.

One other important aspect of intergovernmental relations which receives only the most casual attention is cooperation in maintenance of economic stability. Yet a good deal might be accomplished by redesigning the grant system and the scheme of employment security. Insofar as the fiscal systems of state and local governments operate perversely over the business cycle, the task of the federal government in implementing the Employment Act of 1946 will be the more difficult. But if, as I believe, some of these perversities could be removed or moderated, the task would be more effectively performed.

Undoubtedly the bias of the Commission toward *status quo* grew out of its membership. As has been indicated, ten of the twenty-five members were from the Congress. Of the fifteen appointed by the President, seven had a state background, one a local government background, and three were from the executive branch of the federal government. This left only four who were, so to speak, uncommitted public members. One may doubt that this sort of fragmentation is wise. At best it produces agreement on broad principles which serve as a lowest common denominator. When the principles are applied to situations, it favors retention of what is and yet does not protect against numerous dissents. Is it desirable to have so large a Commission? How can members of Congress, or of the executive branch, or governors actually in office (as distinct from ex-governors), find adequate time to sit as members of a Commission? [19] Would the nation not be better served by a small body of distinguished citizens who can give full time to their duties? [20]

[19] Representative Dingell expressly declared that he could not.

[20] The model of a British Royal Commission comes to mind.

# A NOTE ON PLANNING AND INDUCEMENT TO WORK

OTTO VON MERING *

THE theory of tax transformation attempts to answer the question of which taxes are work-restricting, and which are work-stimulating. The essential criterion that determines these effects is whether the amount of the tax does or does not depend on earned income. Broadly, four different kinds of taxes may be distinguished.[1]

1. Fixed taxes, i.e., taxes whose size is independent of earned income;
2. Taxes which vary in proportion to earned income;
3. Taxes which rise more than proportionately to earned income (" progressive " taxes);
4. Taxes which rise less than proportionately to earned income (" regressive " taxes).

Poll taxes are an example of the first kind, but estate taxes and income taxes on income from interest and dividends also belong in general to this group.

The proportional income tax on earned income is a typical example of the second group. The modern progressive income tax, insofar as it affects earned income, is representative of the third class.

Regressive income taxes are obsolete. There are, however, a number of taxes which, although not assessed on income, actually weigh relatively more heavily on the earned income of lower income groups than on that of individuals in the higher brackets. This is true of many consumption taxes and probably of sales taxes.

Using the customary indifference curve approach with the abscissa denoting earned income and the ordinate standing for leisure (see Figure 1) we may draw a price line *ML* to indicate the market situation as given before taxation is imposed. As a result of taxation the price line is shifted in various ways depending on the kind of burden imposed:

a) A tax independent of earned income (" fixed " tax) brings about a parallel shift of the price line to the left, such as the line *M'L'* in Figure 1.
b) In case of a tax in proportion to earned income, the price line turns

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The following article was inspired by a belated study of Professor Carl Shoup's article, " Problems in War Finance," *American Economic Review* (March, 1943), p. 74.

It appears that some statements made by Professor Shoup concerning the effects of certain war-planning measures—statements at which Professor Shoup seems to have arrived more or less intuitively—may be proven with the aid of the technique developed in connection with the theory of tax transformation.

I am indebted to Dr. Shoup for valuable suggestions concerning the final draft of this article.

[1] The theory of tax transformation has been, for a long time, the stepchild of the theory of taxation. For more details see Duncan Black, *The Incidence of Income Taxes* (London, 1939), pp. 157-167, which deals mainly with proportional income taxation and the author's *Shifting and Incidence of Taxation* (Philadelphia, 1942), pp. 100-116.

to the left with $M$ as axis, and the new price line would be, for example, $MQ$.

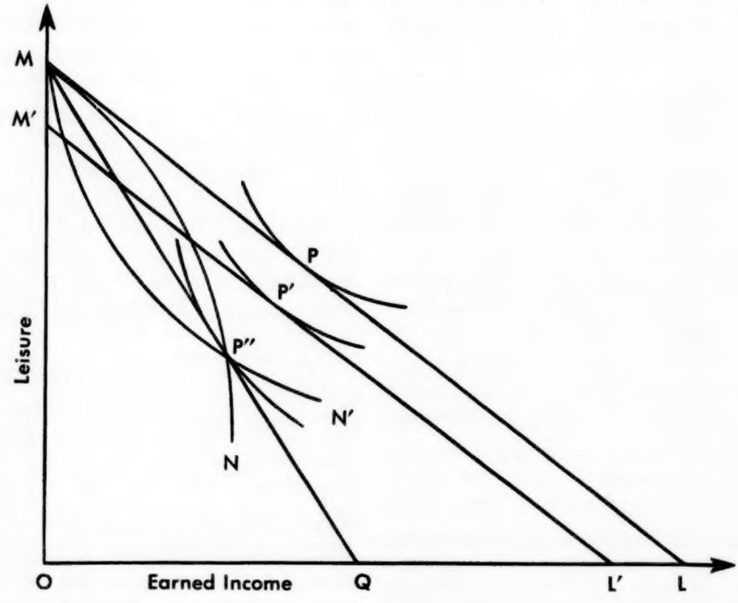
c) If a progressive income tax is imposed, the new price line would be concave down, e.g. $MN$.

d) The price line resulting from a regressive income tax, on the other hand, would be convex down such as the curve MN'.[2]

ferior good, the point of tangency will be downward to the left of the original point (for example, $P'$ instead of $P$) in case of a fixed tax. In the other cases the effect of the tax is in general uncertain. It seems safe, however, to make the following statement: If the three price lines $MQ$, $MN$, and $MN'$ intersect at a certain point $P''$ and if $P''$ is the point of tangency of the price line $MQ$ with an indifference curve, then the point of tangency of the curve $MN$ with an indifference curve will be upward to the left and the point of tangency of the curve $MN'$ with an indifference curve will be downward to

FIGURE 1

GEOMETRICAL ANALYSIS OF THE RESPONSE OF INDIVIDUALS TO INCOME TAXES




The new equilibrium (tangency of an indifference curve with one of the new price lines) is determined by the shape of the indifference curves. Since leisure can hardly be considered an in-

[2] For a more detailed discussion, see the author's *Shifting and Incidence of Taxation*, pp. 111 ff.

the right of $P''$.[3] That is to say, the amount of leisure as a result of a proportional income tax will be smaller than if a progressive income tax had been imposed but greater than in the case of a regressive income tax. Somewhat loosely speaking, we may state that a progressive income tax is "more likely" to reduce the efforts of the taxed person than a proportional income tax, and a proportional income tax is "more likely" to have work-restricting effects than a regressive income tax.

It is worth noting that the above conclusions are not based on the assumption that the taxpayer is conscious of his tax burden; in principle it makes no difference, so far as tax transformation is concerned, whether or not the tax is assessed on income. The significant point is to what extent the various income brackets are (possibly as a result of tax shifting) actually affected by the impost.

A duty on wheat or other necessities would have the same work-stimulating effect as a fixed tax, if we assume that the consumption of those necessities is completely unaffected by the duty and that all households consume the same quantities. In either case, the price line will be subject to a parallel shift to the left. A sales tax,[4] on the other hand, or taxes on commodities such as tobacco or beer would have, roughly, the same effects as a regressive income tax, assuming of course that the taxes are shifted to the consumer. In other words, if the tax system is to be used to increase the amount of work done, sales taxes and commodity taxes would appear to be preferable to proportional income taxes, not to mention progressive income taxation. Taxes on necessities would have the most work-stimulating effects of all.

In discussions of wartime planning a spendings tax has often been suggested. The principal objective of this tax would be to restrict consumption in order to avoid inflation. It is usually advocated that the tax be progressive. Insofar as the main incentive to work is supplied by the possibility of spending the earned income immediately, it might be argued that the progressiveness of the spendings tax would tend to reduce efforts.[5] However, conditions of mobilization might restrict the possibility of spending in any event and wartime psychology might help to emphasize the necessity of saving.

Taxes on consumption, including sales taxes, are of course open to the objection that they weaken demand for consumers' goods more than income taxes do and that they are, therefore, in times of peace likely to reduce employment and national income. Such effects are conceivable indeed. But the possible adverse effects of income taxes on the supply of labor as compared to commodity taxes should not be overlooked. In a dynamically expanding economy the last-mentioned effects are more important. If we believe, on the other hand, that the economy has reached the stage of maturity, the disadvantages of a high income tax may be minimized and maintenance of a high level of consumption could be of major significance. In this writer's opinion our economy is far from being

[3] The curves may, however, coincide over a certain range. von Mering, *op. cit.*, p. 114.

[4] Such a tax exempts savings, rentals, and expenditures on many services, Shoup, *op. cit.*, p. 76.

[5] This seems to be also Prof. Shoup's opinion, *op. cit.*, p. 77.

mature, but this can hardly be proved to the satisfaction of everyone. Even disregarding the thesis that maintenance of a high consumption level is needed for the support of national income and employment, it still can be argued that a higher general living standard through exemption of the masses from all taxes will result in better health conditions and hence in greater efficiency of the workers, and that this factor outweighs the possible effort-restraining effects of a highly progressive income tax. As is so often true in economics, assumptions for diametrically opposed conclusions are available to the economist, resulting in that kind of controversial discussion which makes economic theory at once interesting and unsatisfactory.

A planned economy in the modern sense of the word not only provides for progressive taxation with tax exemption of the low income groups but also attempts to set up a system of government expenditures which benefits the less well-to-do. There are many ways of carrying out this principle. Expenditures for free education, for public health and public parks, for social security and payments to the aged are standard examples. Subsidies to producers allowing reductions in prices of necessities, such as suggested by Lord Beveridge—particularly those for food and fuel—and price ceilings below the competitive price, and rationing are measures of a more determined planning system. Without passing judgment on the general merits of these and other similar government expenditures, one may well examine their effects on willingness to work.

Let us first discuss benefits of a fixed amount which accrue equally to every recipient of earned income. In this case, the result is just the opposite of what happens if a fixed tax is imposed. The price line which in the case of the tax of a constant amount underwent a parallel shift to the left is now, with unchanged direction, moved to the right (from *ML* to *M'L'* in Figure 2). That is to say, leisure time is necessarily increased. If we assume—for the sake of the argument, though in general unrealistically—that government benefits increase real income in proportion to the size of the given earned income, the price line turns to the *right* with *M* as axis and changes to *MQ* (see Figure 2); in this case the effect of the benefit of government expenditure on efforts can not be established in general.[6]

In the case of benefits increasing with, but less than in proportion to, earned income, the shape of the new price line is concave down, as for example *MN* in Figure 2. Now the reasoning used when discussing the effects of a progressive income tax[7] applies. The point of tangency of the new price line, $P_2$ in Figure 2, is upward to the left of the tangency point which would hold in the case of benefits proportional to income ($P_1$ in Figure 2). In other words, benefits which favor lower income groups tend to reduce efforts more than if all income groups draw from the government spending an advantage in proportion to their income.

It is perhaps needless to say that the effects of government expenditure which benefit the higher income groups more than in proportion to their earned income would correspond to the results of a regressive income taxation. The

[6] This conclusion corresponds to that with respect to a proportionate income tax.

[7] See p. 71.

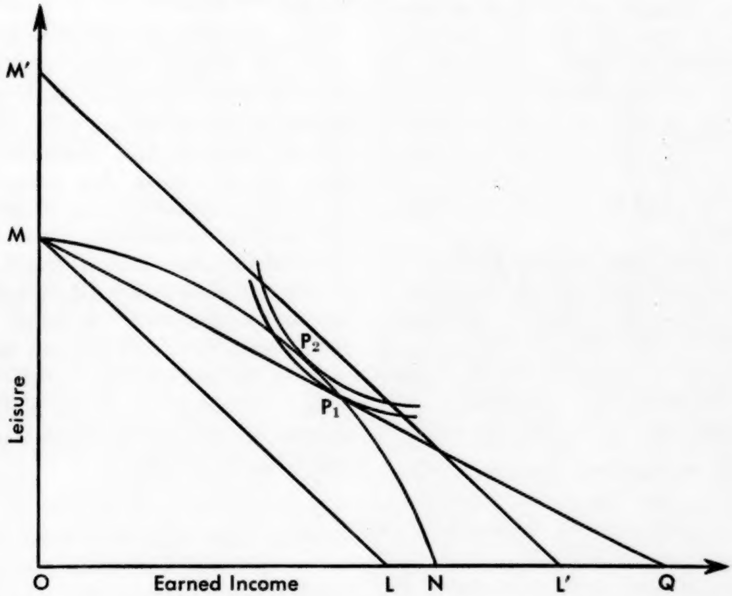
shape of the new price line would be convex down and the point of tangency of this new price line would be downward to the right of the tangency point which holds in the case of proportional benefits. That is to say, benefits which favor higher income groups would have the tendency to reduce efforts less than if the advantages drawn from government expenditure were proportional to income.

amount. In some cases, benefits will not be the same for everybody but rather increase with, although less than in proportion to, earned income. Benefits accruing to people more than in proportion to their earned income are hardly of great practical significance in our time.

As indicated earlier, some statements in the literature regarding specific government planning measures, though not

FIGURE 2

Geometrical Analysis of the Response of Individuals to Government Benefits




Turning to actual government expenditures, it appears that rationing combined with price ceilings—and also government subsidies—aimed at cheaper prices for necessities will have approximately those effects which were stated above with respect to benefits of a fixed

proven completely, are nevertheless in line with the general conclusions set forth above. It has been stated, for example, that " the work-restricting effect of widespread rationing might be more severe than any tax measure "[8];

[8] Shoup, *op. cit.*, p. 78.

it has also been argued that each person who benefits from government expenditure " will be in possession of a larger real income than before and will tend to increase his consumption of the different commodities which he enjoys, and that one of these commodities is leisure." [9] Perhaps our previous discussion is apt to confirm these and similar statements.

There is one important difference between the effects of taxation and those of benefits on willingness to work. Other things being equal, taxation reduces, benefits increase the standard of living. People are in general more eager to maintain than to raise their given living standard. The possible efforts—increasing effects of taxation will therefore be more strongly marked and the possible work-restricting results of taxation will be less pronounced than the corresponding consequences of public benefits.

The conclusions reached with respect to the effects of benefits on the worker's effort are—similar to the statements concerning the influence of taxation on willingness to work—subject to important qualifications. Government expenditure may well raise the worker's ability to such an extent that the labor-restricting effects which were discussed above are more than compensated. Better health, better food, better clothing, better education, and so on resulting from government expenditure, could lift the worker's mental and physical capacity so that the product of a day's work would be greater even though the daily working time was much reduced. Unfortunately, such consequences of dynamic character can not be appraised precisely. There is probably somewhere an optimum where the two counteracting forces are in balance.

In any event, both the effects of taxation and those of benefits on inducement to work are factors with which modern economic welfare policy should reckon. Stating those undesirable effects does not mean that present-day fiscal policy should give up progressive taxation and government spending in favor of the lower income groups even if such change in policy did, on balance, increase productivity. It means only that modern fiscal policy cannot be carried out without paying a price. This price indeed may not be too high, but nevertheless it is useful to demonstrate that it has to be paid.

[9] Black, *op. cit.*, p. 166.

# RECIPROCITY IN THE TAXATION OF INTERSTATE TRUCKS

WALTER F. SCHEFFER *

TAXATION of heavy motor vehicles operating in interstate commerce creates a complex problem. Every state employs the *theory* of the highway-user tax, such as the gasoline tax, in its attempt to make those who use the highways bear the principal burden of construction and maintenance. Each state, however, determines for itself the kind and amount of tax assessed its highway users. Consequently, considerable variations exist among the many states.

The interstate differences in highway-user taxes and regulatory policies create trade barriers and cause considerable loss of revenue to some states. If a state taxes highway use without considering the relative tax burdens in various states it can cause inequities for interstate operators of heavy motor vehicles. It is essential, therefore, that the states reconsider the problem of existing reciprocity agreements which are intended to provide relief to resident interstate truck operators from certain out-of-state highway user taxes.

Interstate tax reciprocity was originally based on a rather simple concept. The Committee on Highway Use Taxes of the National Association of Tax Administrators stated it in the following manner:

> It was felt that the imposition of certain taxes upon the same vehicle by more than one state created trade barriers "when multiple-state taxation of the equipment and services reaches the level where the cost is unreasonable when compared with the taxes on the same service wherein no state boundaries are crossed." [1]

In an effort to overcome multiple taxation of heavy vehicles operating in interstate commerce, a system of bilateral reciprocity agreements are worked out. At first there was no great problem involved because existing interstate travel was negligible in terms of both trips and cargo weights. By the early 1920's, however, the states already were faced with the problem of taxing interstate transports while seeking relief for the resident interstate truckers. Even then, it was not always easy to obtain agreement among the few states involved. Early attempts to arrive at uniform legislation affecting the licensing of motor trucks and busses among the several states were generally to no great avail. Reciprocity agreements were easier to achieve, but, at most, they often proved to be temporary truce agreements in the truck-tax wars which have characterized the relations between states over the past thirty years.

* The author is a member of the Department of Government at the University of Oklahoma.

[1] National Association of Tax Administrators, *A Practical Program to Improve Taxation of Interstate Highway Use*, 1952, p. 20, quoting Fred Meyers, *Highway Research Board Proceedings*, 1946, p. 8.

### *Factors Affecting Reciprocal Arrangements Among the States*

Provided all factors involved are equal, the practice among the states of entering into reciprocity agreements on truck taxes is an appropriate means for removing barriers on interstate commerce and giving relief to some truckers. In actual practice this is not the case. Each state is free to establish its own tax policy, regulatory measures; and enforcement procedures. These factors are very important in the making of successful agreements.

The National Association of Tax Administrators offers some examples which disclose certain salient facts that make many of the present reciprocity agreements untenable. A few of these instances are contained in the following:

> . . . an operator may decide to register all of his trucks in State A (and he would probably do so if A's taxes were lower than B's), even though he used B's highways more extensively than A's. Bridge states may be greatly disadvantaged. . . .
>
> Reciprocity may also be unfair to trucks within a state. For example, the truck traveling in two states may use State A's highways 25,000 miles a year. A truck of the same type which never leaves State A may travel only 10,000 miles. Under a reciprocal arrangement the interstate truck may pay nothing to A; even if fees are apportioned between A and B, the interstate truck will pay less to A than the intrastate truck although it uses the highways more.
>
> . . . another example:
>
> a. State A has high annual weight taxes but no motor carrier taxes.
>
> b. State B has low weight taxes and also a mileage tax.
>
> c. State C has no weight taxes at all but has a mileage tax.
>
> Under what circumstances should reciprocity be granted? Usually only the annual taxes are considered. The results are likely to be inconsistent. For example, A may collect as much from the average truck under its weight tax as B collects from its combined weight and mileage taxes. But B grants reciprocity on its weight tax so A gives B's trucks exemption from its weight taxes, even though B continues to collect mileage taxes from A's trucks. On the other hand, C has no annual tax to waive so A withholds reciprocity. C's trucks are taxed in A while B's are exempt although B may be collecting as much from A's trucks as C is."[2]

It appears that the complexities resulting from the difference in state laws and tax structures make it impossible to achieve equity in reciprocity agreements for all parties concerned. An additional factor to be considered is that although this method of relief served with relative success in an earlier time, today motor vehicles have advanced to a point at which travel is no longer confined to a couple of states or even to a particular region. Bilateral agreements, however satisfactory they may be for the states concerned, do not serve the real needs of interstate movement. Even in those cases where agreements are numerous, the inevitable variations that exist among the states do not make for the most satisfactory interstate movement. Interstate traffic is no longer uncommon; it demands something more to insure its free movement than outmoded reciprocal arrangements originally designed to allow for the unusual.

### *Interstate Co-operative Action as a Solution to Reciprocity*

[2] *Ibid.*, pp. 22-23.

It is undeniable that the states are faced with a dilemma. Where full reciprocity is realized, those states which impose the higher vehicle fees must give up the revenues which would be collected if out-of-state trucks were required to pay their share of the highway as do resident trucks. On the other hand, when a state withholds reciprocity, it imposes an inequitable burden on its domiciled vehicles operating in interstate commerce because they are inevitably forced to pay double or triple taxes, depending upon the number of states in which they travel. Some form of inequity appears inevitable under independent state action, regardless of the efforts made to mitigate the burdens on the affected interests. Basically, it is sound policy for a state to require all who use its facilities to pay according to the extent of that use. Therein rests the justification for the state to require nonresident payment of vehicle taxes. No foreign operator should have free use of the roads. But to tax such an operator doubly is not justified when the use which he makes of a state's highways is not double that of another whose operation is intrastate only.

The general dissatisfaction with, and considerable evidence of, the nonworkability of present arrangements, and the problems resulting from the variations among the many states, create the need for a new approach to the problem. This might be accomplished by interstate co-operation differing from that now employed under existing state reciprocal agreements.

It is unlikely that the states, in the foreseeable future, will relinquish their power of taxation of interstate motor vehicles. From a practical standpoint, therefore, it is advisable to try to devise a new method of taxation which will allow the states to continue their tax programs but to adapt them to an equitable arrangement whereby both the state and the truck operators receive fair treatment. A plan of this nature was suggested in 1944 by the Board of Investigation and Research, which was established by Congress in 1940 to study transportation.[3] More recently, the plan has received support from the National Association of Tax Administrators[4] and the Council of State Governments.[5] These two organizations examined the workability of the original proposal and have prepared model legislation to implement the basic concept of the plan.

*Proposed Tax Legislation*

The model legislation proposes that the states adopt an "in-lieu-mileage" tax to apply to certain weight groups of interstate trucks. This tax is designed to take the place of all other highway-user taxes, including gasoline taxes, registration fees, ton-mile or weight-mile taxes, and any other user tax imposed by the state and applicable to the particular vehicle within an established weight category. The intent is to calculate the "in-lieu-mileage" tax so that it is equivalent to the combined user taxes imposed on the intrastate operation of any particular truck classification. In

[3] Board of Investigation and Research, *Interstate Trade Barriers Affecting Motor Vehicle Transportation*, Senate Committee on Interstate Commerce, Senate Doc. No. 81, 79th Cong., 1st sess., (Washington: Government Printing Office, 1945), pp. 75-76.

[4] National Association of Tax Administrators, *Taxation of Interstate Highway Use*, 1952.

[5] The Council of State Governments, *Suggested Interstate Highway Use Tax Law*, (Chicago, Illinois, 1952).

other words, the plan contemplates the computation of a per-mile tax burden as though the entire operation of the vehicle was carried on within the state.[6]

After the state legislature establishes the various truck categories for mileage tax purposes, it would then fix a fair tax rate for each category. Operators of heavy interstate vehicles would be required to register them in their state of domicile in order to secure a license plate, preferably with an interstate designation. The license plate fee should be nominal to cover only the administrative costs. It would not be subject to annual renewals since its only use is to identify the trucker's acceptance of the plan and method of paying for road use. The operator would be free to travel in any other state adopting the plan. Payment of the mileage tax would be made periodically to the various states in which the truck traveled, according to the number of miles traveled in the state times the state rate per mile of operation for the specific vehicle.

The following example illustrates the manner in which the plan is intended to function. In 1950, state A's user taxes and fees assessed a three axle, tractor-semitrailer combination weighing 40,000 pounds gross and used as a for-hire contract truck a total of $1,190. Assuming this type vehicle travels an average of 45,000 miles per year, a mileage figure arrived at by the Bureau of Public Roads,[7] it would pay a tax equivalent to 2.64 cents per mile for all of its intrastate operations. Another truck with the identical characteristics to those of the first one is also registered in state A, but this second truck carries on interstate operations to the extent that only 15,000 of the 45,000 miles traveled are within the state's boundaries. A third truck, registered in a foreign state but bearing the same characteristics, also operates only 15,000 miles annually in State A. The taxes paid by each of the trucks would be accordingly: The first truck would, of course, pay $1,190 to State A; the second truck would pay 2.64 cents times 15,000 or about $396; the third truck would pay the same amount to State A as the second truck because it traveled the same distance over the state's highways. State A's trucks would pay mileage fees to other states according to the extent of their travel in those states.[8]

If the suggested interstate highway-user tax went into effect, the rate per mile of operation would vary, and sometimes considerably, among the different states adopting the plan. Assuming that the vehicles in the different classes travel about the same mileage in the various states, one can arrive at the rate per mile for all the states.[9] If a single-unit truck weighing 18,500 pounds gross and traveling 25,000 miles a year is used as an example, the rate per mile based on the total taxes imposed would be equal to the following in the states indicated: (See Table 1.)

In each state there would be a deduction from the total mileage tax in an

[6] Council of State Governments, *op. cit.*, p. 4.

[7] E. M. Cope, "State Road-User and Personal Property Taxes on Selected Motor Vehicles," *Public Roads*, Vol. 26, No. 2, June, 1950.

[8] For other examples refer to Council of State Governments, *op. cit.*, p. 4 and National Association of Tax Administrators, *op. cit.*, p. 26.

[9] The Bureau of Public Roads, for example, listed the total taxes paid in 1950 by certain classes of commercial vehicles in all the states. E. M. Cope, *op. cit.*

amount equal to the motor fuel tax paid by the operator, because that is included within the calculated mileage tax. Furthermore, the proposed plan provides for border zone traffic, resulting from residence near state borders, special trips in interstate commerce made by otherwise intrastate operators, and other clarifying items.

TABLE 1

| State | Total User Taxes (In Dollars) | User Taxes Per Mile (In Cents) |
|---|---|---|
| Wisconsin ........ | $528.84 | $.0211 |
| Iowa ............ | 313.84 | .0125 |
| Minnesota ....... | 279.80 | .0112 |
| Ohio ............ | 286.84 | .0111 |
| Indiana .......... | 273.36 * | .0109 |
| Michigan ........ | 264.13 | .0105 |
| Illinois .......... | 250.61 * | .0100 |

* Includes property tax.

It appears that this plan offers a basis for resolving the present inequitable reciprocal arrangements. Each state retains the authority to determine its tax schedules and to receive payment according to the use made of its highways by all commercial users, regardless of residence. It is a suggestion which merits consideration by all the states as a great stride forward in interstate highway transportation, but it is possible that the answer to this problem is in the willingness of the states to recognize the need for a more satisfactory treatment of the problem than is presently the case.

The proposed highway-user tax, however, is not free from defects. In the first place, there will inevitably be difficulties in administration. It assumes a degree of honesty among the units taxed which may not be present in fact. The total mileages traveled could be falsified so that the operator pays for the principal mileage in states with the lowest tax rate per mile. This is a problem for the high-rate states to check. A state whose taxes are considerably higher than those in neighboring states is susceptible to discrimination by those seeking to violate the intent of the proposed act.

In actual application it is doubtful that all states would agree to adopt this plan even within a general region. The proposed legislation provides for this contingency by allowing for reciprocal agreements with the nonconforming state, permitting, thereby, tax relief for the trucks of that state operating in conforming states, and vice versa. There are inherent, however, in this substitute reciprocity plan many of the difficulties present under the current arrangements. At some point it seems, though, that one is justified in assuming, where a reasonable plan is proposed, that the states will try to resolve these difficulties in good faith and that they will arrive at an agreement which is mutually satisfactory. None of the proposals regarding reciprocity is beyond criticism in respect to weaknesses, but some are more vulnerable than others and rely more upon rational application. The interstate highway-use tax is suggested as the least vulnerable under the method of attack—that is, co-operative interstate action.[10]

### *Federal Solution to the Problem of Reciprocity*

The states *must* find an answer to their problem of taxing interstate trucks or the federal government may be urged to remove the obstruction to

[10] See Bureau of Agricultural Economics, *Interstate Trade Barriers to Truck Transportation*, pp. 11-13, for some other recent regional approaches.

interstate commerce which the different state tax programs now impose. Proposals for federal intervention have received little or no real support, probably because of the recognized difficulties inherent in their solutions of the problem.

It is definitely established that the states have authority to tax nonresident interstate trucks.[11] It is suggested, however, that the states might agree to abondon this field of taxation by " the imposition of a federal tax distributed to the States on condition that the latter confine their direct taxation of motor vehicles to those of resident operators." [12] The difficulties which are likely to arise under federal solution are readily admitted by its proponents. It is believed that this solution would be cumbersome and difficult to implement, and that it would fail to remove all the inequities present in interstate movement.[13] On the other hand, if some action or threat of action is not taken at the federal level, the multiple tax burdens on interstate commerce are likely to increase, at least sporadically. Interstate commerce should not be subsidized, nor should it be burdened beyond its share.

Any federal attempt at taxation of interstate vehicles requires that a method of distribution or sharing be instituted which approximates closely the returns the individual states realize under present taxing arrangements. This is essential for practical reasons. The states must meet the condition peculiar to their areas, which include such factors as topography, soil and weather conditions as they affect the highways, economic ability or wealth, and miles of roads. These factors are important to the state in establishing its own rate of taxation. If the distribution of a federally-collected tax, imposed in place of the state tax, is made without consideration of the above-mentioned factors, the states may be subject to unnecessary financial loss. The problems apparent in a federal scheme of this nature appear to merit the conclusion drawn by Professor Maxwell when he surveyed the possibility of a federally-collected and shared gasoline tax as a substitute for state gasoline taxes. He said:

> The " fairest " plan that the mind of man could devise would not, moreover, remove the practical difficulty which arises from the fact that all the states must be treated alike when they are not alike in their present dependence upon taxation of motor fuel.[14]

Professor Maxwell's conclusion was cited with emphasis in the congressional study on intergovernmental fiscal relations.[15] The complexities of implementing a federal taxation scheme as considered in the above-mentioned studies may rule out a federally-collected gasoline tax plan as these studies

[11] *Hendrick* v. *Maryland*, 235 U. S. 610 (1915); *Kane* v. *New Jersey*, 242 U. S. 160 (1916); *Clark* v. *Poor*, 274 U. S. 554 (1927); *Clark* v. *Paul Gray Inc.*, 306 U. S. 583 (1938); *Capital Greyhound Lines* v. *Brice*, 70 S. Ct. 806 (1950).

[12] U. S. Congress, Senate, *Federal, State, and Local Government Fiscal Relations*, Sen. Doc. 69, 78th Cong., 1st sess., in pursuance to S. Res. 160, (Washington; Government Printing Office, 1943), p. 266.

[13] *Ibid.* Board of Investigation and Research, *op. cit.*, p. 74.

[14] James A. Maxwell, *Fiscal Impact of Federalism*, (Cambridge: Harvard University Press, 1946), p. 310.

[15] *Federal, State and Local Government Fiscal Relations*, Senate Doc. No. 69, 78th Cong., 1st sess., pp. 523 and 524.

conceived of such a tax. It does not, however, preclude the possibility of a different approach in the use of a federally-collected gasoline tax designed to replace state taxes.

In spite of the obstacles to the successful implementation of a federal scheme, the need for a better solution to the taxation of interstate trucking operations justifies the investigation of all possible means offering relief, including the federal approach. It appears apropos, therefore, to suggest at least one medium through which this might be done on the national level. Only a general outline can be offered because the details of a specific tax and distribution program would necessarily be determined by all the pertinent information and facts that could be collected on the various aspects of the proposal.

A federal program requires that there be, first, a definition of what is to be included as interstate operations subject to federal taxation. Only vehicles over a specified size and weight classification making more than a limited number of trips out of their state of domicile should, for instance, be subject to the federal law. After the truck categories are established, the problem is the taxation of the various classes. It appears logical that the entire tax program could be based upon a federal gasoline tax, provided that the inequities inherent in this type of tax when used alone can be overcome. This seems possible in light of information and studies made in recent years on such items as:

1. Mileage traveled by certain weight trucks.
2. Total user taxes paid in the various states by trucks in the different weight and mileage categories.
3. The amount of user taxes paid per mile of operation.[16]

If a federal gasoline tax was imposed on various established categories of interstate operators according to a graduated scale based on their operations as determined, it would result in a reasonably equitable assessment for road use on all types of interstate commercial travel. For example, if it is found that the 18,500 pound gross weight single-unit truck travels approximately 25,000 miles annually, the rate of taxes per mile of operation can be determined for each state in the Union and the District of Columbia.[17] The amount of taxes to be paid to each state by this type vehicle can be determined by multiplying the total miles of travel made by all vehicles within this category by the user-tax rate per mile in each state. The total sum received from this truck category by the 49 taxing units could then be used to determine how much federal gasoline tax is required to bring into the federal treasury an equivalent to the sum now accruing to the states from this source. This federal gasoline tax would not be paid at the time of purchase, but rather at a later reporting date. The interstate operator would continue to pay existing state gasoline taxes and later would receive a refund because the federal tax is to replace all other user taxes.

To carry the example further, the amount of gasoline tax accruing to the federal government from the above truck category would be determined by dividing the distance traveled by trucks of this size by their average mileage per

[16] See footnote 7.

[17] See table above as an example in which the rate of taxes per mile of travel for one truck classification has been determined for a number of states.

gallon of gasoline. For instance, if 6.5 miles was averaged on a gallon of gasoline and the truck traveled 20,000 miles in a year, it would have consumed approximately 3,077 gallons of fuel. The federal tax per gallon, especially arrived at for this truck category, times the consumption would be the tax payment required. If the federal tax is 10 cents per gallon of gasoline, the tax owed in this example is about $308.

The same factors and determination would be required for each size truck. A simplification in arriving at categories could be accomplished by agreements with manufacturers or, if that failed, by a period of arbitrary classification of trucks. As time passed, more accurate and detailed information on operations and implementation of policy procedures in interstate commerce probably would provide a basis for ironing out inequities resulting from an initial lack of scientific information.

Each interstate operator would be required to keep a record of his operations in each state. There would be little incentive to falsify the extent of travel in each state because the federal tax would be the same regardless of where the miles were traveled.

After the federal government receives the periodic reports and payment of taxes from the interstate operators, it must provide for the distribution of funds to the states on a basis whereby each state will receive approximately the same amount as under present taxing arrangements. This can be accomplished by tabulating the total mileage of interstate truck operations carried on in every state in each of the categories established. This mileage times the user-tax rate per mile of travel imposed in each state for each classification of trucks will determine the share the respective states will receive.

A hypothetical example of the proposed distribution formula follows: Interstate truck operations in the 18,500 pounds gross weight classification reports a total of 5,000,000 miles of travel for a three-month period in State A. The rate per mile under the state tax program for this type of operation is 2.1 cents. To arrive at the state share from the interstate operation, multiply .021 times 5,000,000, which equals $105,000 received by the state for one-fourth of a year from one class of truck operation. It would cost the federal government no revenue, other than nominal administrative costs, because the graduated tax on gasoline would be calculated for each class of interstate vehicle so that the total collection by the federal government would equal the many unit-collections formerly made. All interstate trucks would pay a uniform tax to the federal government according to their classification, but two states having an equal interstate mileage credit would not necessarily receive an equal share of the federal distribution because of their different user tax rates per mile of travel.

Theoretically, this plan can be made to operate equitably. It does not force the states into an unrealistic pattern of uniformity. A recognition is given to differences in the needs and resources of the states. These remain as the determinants of the share of federal funds distributed under the program that the state receives. The gauge is the total tax loads imposed on interstate trucks in the various categories.

In spite of the obstacles inherent in this proposal, it seems to offer as much chance for implementation as the pro-

posal requiring interstate co-operation. It is natural that the states should prefer an interstate co-operative proposal rather than an extension of federal participation. If the states fail, however, to solve their problem in a co-operative spirit, some form of federal action, along the lines suggested, appears justified. The record of state co-operation is replete with a willingness to take joint action through compacts, uniform legislation, conferences, and the like, on many subjects of mutual concern among the states. There is, however, as Professor Graves points out, an absence of co-operative agreements on current controversial issues.[18] And the problem of truck tax reciprocity stands prominently among these issues.

[18] W. Brooke Graves, *American State Government*, (Boston: D. C. Heath and Co., 1953), p. 840.

# CINCINNATI'S INCOME TAX—AN EMERGENCY FINANCING DEVICE

ROBERT H. WESSEL *

ON two occasions, first in 1954 and again in 1955, the City of Cincinnati turned to the municipal income tax as a source of revenue. Both times the tax was intended as an emergency measure only, which the Cincinnati City Council hoped would be supplanted as soon as possible by an increase in real property tax rates. Its stopgap nature sets the Cincinnati income tax apart from the typical municipal income tax which usually is viewed as a more or less permanent source of funds. Our purpose is to evaluate the effectiveness of Cincinnati's tax as an emergency or stopgap measure and to consider the special problems created by this use of the tax.

## *The Background of the Income Tax in Cincinnati*

The underlying causes of the financial difficulties which led Cincinnati to adopt the income tax are quite familiar. Population growth,[1] price level increases, and the provision of more services by the city government, combined to swell appropriations from $19,848,906 in 1946 to $38,596,824 in 1954, an increase of about 95 per cent.[2] During the same period the tax duplicate increased from $907,074,870 to $1,281,532,550, or by only about 41 per cent. Since the growth of expenditures far outstripped the increase in the tax base, an upward revision of the city real property tax rate from $9.80 per $1,000 valuation in 1946 to $14.62 in 1953 necessarily ensued. It is not surprising, however, that owners of real estate strenuously objected to bearing the entire increase in the cost of local government. They argued that residents who do not own real estate as well as those who live outside the city but enjoy many of its services should contribute to its support.

The opponents of increased real property tax rates were aided immensely by Ohio law which requires specific approval by the voters if the total effective tax rate (city, county, school district and state) is to exceed $10.00 per $1000 valuation.[3] Since recent financial requirements have necessitated a rate far above this level, requests for the approval of tax rates—either renewals of existing rates or additional increases—have appeared on the ballot at almost

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1 The population of the greater Cincinnati area increased 14.9 per cent between 1940 and 1950. However, the increase within the city limits of Cincinnati was only 10.6 per cent while immediately surrounding areas grew by 20.8 per cent.

2 Figures taken from the *Annual Financial Report, City of Cincinnati,* 1946 and 1954.

3 Sec. 5226-2 Ohio General Code. In addition the city charter of Cincinnati imposes a limitation of $7.10 per $1,000 unless the voters specificially approve a higher rate.

every election. This gives the real estate interests an opportunity to take their case to the voters quite frequently and under very favorable circumstances. To the uninformed voter it often seemed as if the city were continually asking for more and more money, even though in most instances the extra levies merely request renewal of existing rates.

In the November, 1951 election, a special levy failed at the polls. However, the issue was resubmitted to voters in December of that year and approval was secured in time to issue 1952 tax bills for the amount of the full levy. But, in 1952 the election laws were amended so that a special election could not be held until 90 days after the filing of a request for such an election. As a result a levy that failed could not be resubmitted until February, 1953 which would be too late for it to be incorporated in the tax bills for the first six months. This, of course, would create a deficit in the city budget. Therefore, when an extra levy failed at the polls in November, 1953, the City Council of Cincinnati, faced with a deficit of six million dollars, was forced to seek a new source of revenue. In its search the Council was restricted by two factors; the large sum which it needed to raise, and the doctrine of pre-emption developed by the Ohio courts which forbids the levying of municipal taxes upon anything which the state itself is taxing.[4] The first factor ruled out such sources as amusement taxes or increased fees; the latter eliminated the sales tax from consideration.[5] As a consequence, if public services were to be maintained at existing levels, the Council had no alternative but to enact an income tax. On February 10, 1954, Cincinnati's first income tax ordinance, which called for an emergency levy effective from April 1 through October 31, 1954, was passed.[6]

In November of 1954, the extra property tax levy, which was intended to supplant the income which had expired on October 31, was submitted to the voters. Although this levy was approved by the electorate, it was later invalidated by the courts because a clause, threatening reinstatement of the income tax should the levy fail, was printed on the ballot.[7] Thus the situation of a year earlier was repeated, and despite long and bitter wrangling the Council enacted another emergency income tax ordinance on February 24, 1955.[8]

### *The Provisions of Cincinnati's Income Taxes*

Since the 1954 and 1955 income tax ordinances are so similar, separate treatment would not be worth while. However, where significant differences *do* exist the provisions of the two ordinances will be distinguished.

These ordinances, which followed the example of the Toledo municipal income tax very closely, levied a tax of one per cent upon:

(1) All salaries, wages, commissions, and other compensation earned by residents.

(2) All salaries, wages, commissions, and other compensation earned by non-

[4] *Zielonka vs. Carrel*, 99 Ohio State 220 (1919).

[5] The State of Ohio levies a 3 per cent retail sales tax on retail sales in excess of \$.40.

[6] City of Cincinnati Ordinance No. 42—1954.

[7] *Walter Beck, et al vs. The City of Cincinnati*, 162 Ohio State 473.

[8] *City of Cincinnati Ordinance*, No. 67—1955.

residents for work done or services performed in the City of Cincinnati.

(3) The net profits of all unincorporated businesses, professions, or other activities, from sales made, work done, and services performed, or business or other activities conducted in the City of Cincinnati, whether or not such unincorporated businesses, professions, or other activities have an office or place of business in the City of Cincinnati.

(4) A resident's share of the net profits of an unincorporated business, profession, or other activity whether located in or outside the City of Cincinnati not attributable to Cincinnati under the formula or separate accounting method provided for herein.

(5) The net profits of all corporations from sales made, work done, and services performed, or business or other activities conducted in the City of Cincinnati, whether or not such corporations have an office or place of business in the City of Cincinnati.[9]

It should be noted that no attempt was made to tax income from intangibles because this source was deemed to have been pre-empted by the State of Ohio which levies an intangible property tax, the measure of which is the amount of income yielded. In addition the tax did not apply to certain specific types of business which the state is considered to have pre-empted through special taxes. Among these, small loan firms, banks, common carriers, utilities, and insurance companies were most important.

When it was necessary to apply a formula to determine the proportion of the entire net profits of a taxpayer to be allocated as having been made within the City of Cincinnati, the time honored "Pennsylvania" formula, developed long ago in Philadelphia, was employed. This formula requires the averaging of three ratios; physical assets within Cincinnati to total physical assets, gross receipts derived from business within Cincinnati to total gross receipts, and payrolls in Cincinnati to total payrolls.[10]

The effective period of the 1954 tax was from April 1 through October 31, a total of seven months. Consequently only wages, salaries, and commissions earned during this period were taxable. However, the ordinance required that the allocation of profits to the seven months' period be determined by multiplying total 1954 profits by the fraction seven-twelfths.[11] The effective period of the 1955 tax was March 1 through November 30, a period of nine months. Following the precedent of the 1954 tax the profit allocation was again based on the profits for the entire year, in this instance multiplied by the fraction three-quarters.[12] The problems and controversy arising out of this system of profit allocation will be discussed later.

Both ordinances required any employer located within the city, who employed one or more persons, to withhold the one per cent tax and remit directly to the city.[13] Taxpayers whose entire taxable income was subject to withholding were required to file no returns or declarations. However, if part or all of a taxpayer's taxable income was not subject to withholding, he had to file declarations of estimated

[9] Section 2 of both ordinances.

[10] Section 2 of both ordinances.

[11] Section 3, Ordinance 42—1954.

[12] Section 3, Ordinance 67—1955.

[13] Section 5 of both the above ordinances.

income and make partial payments based on these estimates in addition to filing a final return.[14]

Since citizens of Cincinnati were subject to the tax on their incomes regardless of where it was earned, the imposition of a municipal income tax by other communities might subject them to double taxation. To avoid hardships of this type the ordinances granted a credit for income taxes paid to other municipalities. This credit was not to exceed the tax assessed by Cincinnati or the amount paid to the other community.[15]

The tax was administered by a tax commissioner, a position filled by the City Treasurer, ex-officio, and a staff recruited on a temporary basis. Since the tax was viewed as an emergency measure no permanent administrative machinery was set up.

*Appraisal of Cincinnati's Income Tax*

It is worth emphasizing once again that upon both occasions Cincinnati's income tax was intended as an emergency fund-raising device only. Consequently it shall be appraised as such. The 1954 ordinance was enacted in order to provide the sum of approximately six million dollars needed to balance the budget. By the end of the calendar year 1954, $6,970,000 had been collected.[16] By the end of June, 1955, collections under the 1954 ordinance had swelled to $7,380,000, and it is estimated that when all payments have been received total receipts will amount to $7,400,000.[17] Thus the 1954 tax supplied not only the necessary revenue but also a handsome surplus.

The 1955 tax was imposed to offset an anticipated budget shortage of more than $8,000,000. During the first four months the tax was in effect collections averaged $1,050,000 per month. By the end of December, one month after the ordinance expired, collections totaled about $9,020,000, and when all payments have been received the figure should reach $9,600,000. So the 1955 tax also met the needs of the city with a good margin to spare.

During its seven months of existence, the 1954 tax produced a yield of $14.37 per capita, which on a twelve-month basis would amount to $24.63. The 1955 yield appears to be about the same. This compares favorably with the experience of most large cities but is not as spectacular as the $16.95 per capita realized in 1952 by Dayton with a one-half per cent tax.[18] Cincinnati's experience therefore demonstrates that an income tax enacted on an emergency basis not only can produce the necessary revenue, but also can realize per capita yields comparable to those obtained in cities where the tax is employed continuously.

In order for a financing device to be satisfactory as an emergency source of revenue it must be capable of producing funds quickly. Cincinnati's tax met this test. The first ordinance was

[14] Sections 4 and 6 of both the above ordinances.

[15] Section 14 of both ordinances.

[16] *Annual Financial Report, City of Cincinnati,* 1954.

[17] This estimate was supplied by City Treasurer Col. George Schiele.

[18] In 1952 the per capita yield in Philadelphia with a 1 per cent tax was $22.02, St. Louis with a ½ per cent, $6.94, Louisville with a 1 per cent $12.08, and Toledo with a 1 per cent tax $28.24. *New Bulletin of the Public Administration Clearing House,* Vol. 28, No. 2, March 1954.

passed on February 10, 1954. By April the necessary administrative organizations had been set up and the tax was being collected. The second ordinance was passed on February 24, 1955 and became effective on March 1. This was possible only because the agency which had administered the 1954 tax was still almost intact.

Even though the agency responsible for collecting the tax was established very rapidly, except for a few officials, including the City Treasurer who was named ex-officio Tax Commissioner, an entirely new organization separate from the regular department of finance was recruited. Despite these seemingly unfavorable conditions, collection costs remained surprisingly low. By the end of 1954, $162,000 had been spent in order to administer the income tax,[19] which amounted to only 2.34 per cent of the amount collected. However, not all of the costs of collection were incurred during the year in which the tax was imposed. Col. Schiele, the City Treasurer, estimated that one-third of the 1955 income tax administrative budget of $295,000 and about 5 per cent of the 1956 budget would be spent on the 1954 tax. This would bring total collection costs to about $275,000 or 3.7 per cent of total collections. This is in line with the 3.5 per cent experienced by Toledo during the first five years it permanently employed a similar tax.[20]

Thus, Cincinnati's experience indicates that a municipal income tax performs satisfactorily as an emergency financing device. Its yield is adequate, both in aggregate and on a per capita basis; it may be instituted quickly; and the costs of collection are reasonable. Now let us turn to some special problems which arise when an income tax is employed in this manner.

*Allocating Income to the Tax Period*

The 1954 ordinance provided that the tax apply to compensation earned from April 1 through October 31. However, the amount of business profits and the incomes of self-employed persons to be allocated to the tax period were to be computed by multiplying the income for the entire year by the fraction, seven-twelfths.[21] This method of allocation was attacked in the courts on the grounds that it was retroactive and discriminatory. Opponents stressed that some taxpayers might have had large incomes during January, February, March, November, and December, when the ordinance was not in effect, and might have earned very little in the seven months' tax period. It was claimed that to assess such individuals on the basis of the total income for twelve months would be highly unfair.[22] Although opponents of this provision were successful in the common pleas court, eventually the validity of this method of allocation was affirmed by the Supreme Court of Ohio which reasoned that use of the entire year as a measure of income instead of the seven months' tax period, rather than being discriminatory, made for equity

[19] *Annual Financial Report, City of Cincinnati*, 1954.

[20] Leon Jay Quinto, *Municipal Income Taxation in the United States*, 1952, p. 50.

[21] The 1955 ordinance, it will be recalled, contained a similar provision except that the fraction to be employed was three-quarters.

[22] *Cincinnati Post*, April 20, 1955.

among taxpayers.[23] Thus the court must have felt that the real intent of the Council was to tax seven-twelfths of one per cent of the income of 1954, and that the specific seven months' period from April through November was designated merely to achieve administrative efficiency in collecting from individual employees through withholding by employers. This approach was necessary because the Council did not agree on the income tax until February, thus making the imposition of the tax for the entire year impossible unless it were to be retroactive. The shortcomings of a retroactive payroll tax are so obvious that they require no discussion here.

The significance of this problem can be considerable since any city which adopts the tax as an emergency measure may have to confront it. Only, if the council, either through good fortune or foresight, is in a position to adopt the tax for a full calendar year can this difficulty be avoided. When such an allocation formula must be written into a tax ordinance, great care should be taken to insure conformity with the constitution and statutes of the state. This will avoid the unfortunate eventuality of having all or part of the tax ordinance declared invalid.

### *Differences in Regional Tax Ordinances*

As a consequence of the enactment of the income tax by Cincinnati, several cities and towns in the greater Cincinnati area adopted income taxes of their own. As is usually the case these were communities which had considerable industry of their own and were, therefore, likely to realize substantial collections from nonresidents. In only one instance, Golf Manor, where on both occasions ordinances identical with those passed by Cincinnati were adopted, was the tax well co-ordinated with the Cincinnati levy. Although similar to the Cincinnati tax in most respects, a majority of these levies, as shown in Table 1, had different effective periods—and the important community of Norwood employed a different rate in 1955.

These differences produced several undesirable results. Taxpayers who did business in more than one community where the tax was in effect not only were required to allocate income among these communities, but also had to compute their taxes for different

TABLE 1

MUNICIPAL INCOME TAXES IN THE GREATER CINCINNATI AREA

| Community | 1954 Period | 1954 Rate | 1955 Period | 1955 Rate |
|---|---|---|---|---|
| Cincinnati, Ohio ....... | April 1-October 31 | 1% | March 1-November 30 | 1% |
| Golf Manor, Ohio ...... | April 1-October 31 | 1 | March 1-November 30 | 1 |
| Elmwood Pl., Ohio ..... | April 1-December 31 | 1 | NO TAX | |
| Norwood, Ohio ........ | April 1-December 31 | 1 | January 1-December 31 | ½ |
| St. Bernard, Ohio ...... | May 1-December 31 | 1 | May 1-November 30 | 1 |
| Newport, Kentucky[24] .. | Permanently enacted July 1, 1952 | 1 | | 1 |

[23] *Clark vs. City of Cincinnati*, 163 Ohio State 532, 1955.

[24] This tax, which is patterned after the Louisville Occupational License Tax, is imposed solely upon those who work in Newport. Limitation of the tax is the result of constitutional difficulties. For an elaboration of this point see Quinto *op. cit.* pp. 66-68.

periods. In addition unequal tax treatment of individuals resulted. For example, in 1954, a resident of Cincinnati who was employed in Cincinnati paid a 1 per cent tax for seven months, while a Cincinnati resident who worked in Norwood paid a 1 per cent tax for nine months.[25] This type of inequality assumed some importance in view of the fact that thousands of industrial workers were involved. Differences in tax periods and rates also resulted in communities levying upon each other's citizens unequally. Thus throughout 1955 Norwood taxed the earnings of Cincinnatians working in Norwood at one-half per cent, while citizens of Norwood employed in Cincinnati had to pay 1 per cent over a nine month period. The net result was a levy of about three-fourths per cent by Cincinnati upon Norwood citizens as contrasted with a one-half per cent tax by Norwood upon residents of Cincinnati.

Although these difficulties were not particularly serious, their importance was sufficient to indicate that it would be desirable for surrounding industrial communities to adopt ordinances as nearly identical to the one enacted in the major city as possible. In order to enable them to do so the major city should, if the situation permits, allow a reasonable time to elapse between the enactment of the tax ordinances and the date upon which it becomes effective.

### *Conclusion*

Cincinnati has found the municipal income tax to be satisfactory as an emergency financing device.[26] Its yield has been adequate, its administrative costs reasonable, and the problems which it has occasioned have not been serious. However, since emergency financing is inherently subject to serious limitations, Cincinnati should act decisively to resolve its basic financial problem permanently. Ultimately the voters must decide whether the additional revenue, which the city needs, is to be raised by increasing real property tax rates, a permanent income tax, or a combination of both.[27]

[25] He did not have to pay a tax to Cincinnati too, because Cincinnati granted him a credit for the tax paid to Norwood during the period in which the Cincinnati tax was in effect.

[26] Since this manuscript was prepared the City Council of Cincinnati once again has enacted an emergency income tax ordinance. It provides for a tax which is essentially the same as the 1955 tax and will remain in force throughout the calendar years 1956 and 1957.

[27] A compromise proposal calling for a charter amendment which would provide an increase in real property tax rates along with an income tax not to exceed 1 per cent has been advanced by a committee representing four nonpolitical groups. *The Cincinnati Enquirer*, May 14, 1955.

# BOOK REVIEWS

*The Budgetary Process in the United States.* By ARTHUR SMITHIES. A Research Study of the Committee for Economic Development. New York: McGraw-Hill. 1955. Pp. 486.

" Budgetary process " is a modest name for the decision-making cycle of the Federal Government, the annual pregnancy of the largest organization in the free world. Most policy decisions are quantitative; the question is not whether we want something, but how badly we want how much of it. Even decisions that do not involve costs often get carried along by the engine that pulls the budget.

Smithies' book is mainly about that decision process, the formulation and selection of programs, a process that includes both the executive and the legislative branches and the strategy of relations between them. (Programming is an " annual " process only in that the successive waves come about a year apart; the waves overlap, making the process a continual one.) In 1948 he wrote on the related subject of fiscal policy in the American Economic Association's *Survey of Contemporary Economics*, and said that " to make fiscal policy work, economists must contaminate themselves with political theory and public administration. That is where budgeting comes in." The present book is across the divide; budgeting is central, fiscal policy gets one chapter, and the author (Chairman of the Department of Economics at Harvard University and formerly Chief, Economics Section, U. S. Bureau of the Budget) writes not as a contaminated economist but as a student of administrative processes who lets economic theory illuminate the subject but not dominate it. One of the delights of this book is the author's skill in drawing insight from economic theory without losing his judgment to it.

Also in the budgetary process are the problems of control and efficiency. These were traditionally the dominant functions attributed to budgeting; one of the successes of the book is to clarify the distinction between these management functions and the programming function. The point stressed by Smithies is not that the latter is more important—there is no need to choose one and neglect the rest—but that they involve quite different procedures, talents, and techniques, different perspectives in time, and different distributions of responsibility; even the basic classifications of expenditures need to be different for program evaluation from what is most useful for the control of programs or for a review of operating efficiency.

All of this amounts to a tremendously important subject, and the book does a brilliant and highly original job with it. The first fifty pages are on the role of the budgetary process in decision making, and the need for procedures that reflect not only the logic of resource allocation but the practical limitations of people, processes, and the passage of time. The next fifty pages are a history of the dilemmas and conflicts of budget making, budgetary philosophy, and executive-legislative strategy, from Hamilton's time to the Hoover Commission and up to 1952; this is perhaps the most valuable part of the book, and illustrates the issues better than any logical exposition could do. The third fifty pages are description and analysis

of the budgetary process today, both executive and legislative, and both programming and review. There follow seventy pages containing suggestions for improving the process; as a climax this section may be a little disappointing—solutions are seldom as exciting as the problems, and necessarily rest on judgments that are hard to communicate—but as continuation of the earlier discussion it is still excellent.

Next is a fairly intensive (100-page) case study of the national defense budget, if anything amounting to half or more of the budget can be called a " case study." The first part is on " program budgeting ", that is, on the program-decision process. The author is as interested in giving credit for recent improvements as in criticizing shortcomings. He illustrates the importance of classifying expenditures under headings that can be identified with meaningful program categories, rather than with administrative units; he stresses the positive evil of excessive detail, which not only is expensive and worthless but actually wastes and diverts attention. Mainly, however, he stresses the need to bring the dollar implications of military plans into consideration before choices have been made and positions hardened. " Unless the costs of various parts of a program can be expressed in terms of a common unit, such as dollars, there is little likelihood that the notion of program efficiency will receive the attention it deserves. The planners and programmers will simply not have the data with which to determine which combination of programs will achieve results at least cost." This notion—that a logical choice among alternatives cannot be made unless their costs can be compared—is elementary but unfortunately not obvious; it sums up the greater part of what economic reasoning can contribute to the budgetary process, but a part that has so far been communicated with only limited success. (One of the most persuasive earlier expositions of the principle was Vannevar Bush's *Modern Arms and Free Men*, published in 1949.)

The second half of the defense discussion concerns control and efficiency, and here economic reasoning is peculiarly applicable. The problem is that in a large organization there is no " unseen hand ", like a price system, to guide decentralized decisions into routes that minimize costs and conserve resources. The post commander to whom civilian employees cost money but enlisted men are " free " is a perfect example. Smithies cites a number of interesting experiments within the services to reduce wasteful incentives, and makes several suggestions of his own; the key to most of them is some means of making resources " costly " to the eventual user, or, to state it more positively, to make savings not only visible but (at least partly) useful to the man who can make them.

The same section discusses, with restraint, the problem of overelaborate equipment. The problem again is to establish procedures that reflect the notion of costs and alternatives; there are always several ways to accomplish an objective, and only a study of comparative costs can point to the " best " means. A stripped-down hot rod is not necessarily better than a Cadillac, but the number of hot rods obtainable for the price of a Cadillac may make them the best buy, " best " in terms of lives saved and enemy destroyed. " The best " always competes with " the most ". Smithies gives no simple procedural remedy; what he stresses is that " the procedures by which organization and equipment decisions are made can be examined in order to decide whether *the relevant questions are likely to be raised*." The italics are mine but the emphasis is Smithies'; and here we have the essence of what procedures can accomplish: they can assure that the right questions get asked. Correct *answers* cannot be guaranteed by any procedure; but they can be precluded by a poor procedure that fails to pose the right questions.

Following the defense budget is a sample of five nondefense areas: water resources, agriculture, veterans' benefits, government

business enterprises and lending agencies, and federal grants-in-aid. In its mixture of theoretical insight and practical wisdom the chapter on grants-in-aid is a gem. (It can also stand as something of a proxy for foreign assistance programs.) A final section of just over thirty pages discusses the economic impact of the budget.

To find a fault: the book may view the budgetary process too much as a matter of ideal procedures and too little as an arena for conflicting interests. Do present procedures in fact lead to a budget that is too large, too small, too weighted toward or against defense, or agriculture; does it give too much power to congressmen with seniority or, in the executive branch, to accountants, or to economists? The purpose of improvement is to improve the results, not the procedures; and results must be judged partly by subjective criteria. This is not cynicism; it is the view that budgeting is partly a process of negotiation, that in negotiation of conflicting interests there is no abstract " solution ", and that one's judgment of the effectiveness of negotiating arrangements depends on the same criteria by which one judges the outcomes. Smithies, because of the " responsible " nature of his book, may bring to the subject a little more objectivity than the subject can stand.

He occasionally overlooks, perhaps for the same reason, some tactical implications of executive-legislative relations. He mentions the proposal that the President submit his budget in the form of alternatives, indicating the low priority items that would be dropped if the total had to be cut; while he concludes that the proposal is not feasible, he fails to point out that any president who did this would irresistably invite and practically oblige the Congress to cut. But he evens up the score by shrewdly defending the meat-ax approach in Congressional cutting, in terms that are fairly convincing.

On organization, the reviewer found Smithies' suggestion for the Budget Bureau's statistical-standards division extremely interesting but too terse and confused by the retention of an old name for a new and quite different function. This is also true in his treatment of the legislative-reference function. The discussion of the National Security Council was unpersuasive, perhaps because too brief.

Every reader will have his own criticisms, since the topic demands wisdom rather than logic, and judgments must be partly subjective. But after full weight is given to criticism, credit is due to Smithies and the CED not just for producing an excellent book but for conceiving of it and recognizing its importance, and to Smithies for writing with understanding and good will. As a case study in what an economist can do when he accepts a responsibility in a neighboring field, the book should cause pride to the profession.

Thomas C. Schelling
*Yale University*

# BOOK NOTES

*Financing Metropolitan Government.* (Symposium conducted by the Tax Institute, November 18-19, 1954, Princeton.) Princeton: Tax Institute, Incorporated, 1955. Pp. 295. $5.00.

The most recent Tax Institute symposium volume contains a timely series of papers on the important, complicated problem of financing metropolitan government.

More than one-half of the people in this country reside in metropolitan areas—cities of 50,000 or more and their suburbs. These areas are reasonably well integrated economic and social units. They are not well integrated, however, for purposes of governmental administration. According to the Bureau of the Census there are about 170 such areas in the country, but the people residing there contribute directly to the support of more than 14,000 governmental units.

The twenty-five papers which make up this volume examine all sides of the problem created by this situation. It is not possible to list titles and authors here, but the scope of the symposium is suggested by its five major divisions:

1) Metropolitan areas
2) Economic trends affecting metropolitan government
3) Specific problems affecting metropolitan finance
4) Intergovernmental aspects of metropolitan finance
5) Taxation for metropolitan government—looking ahead.

The book also contains a useful bibliography of serious works on the subjects covered.

*Taxes, Tariffs, and Subsidies.* By J. Harvey Perry. Canada: University of Toronto Press, 1955. Two Vols., Pp. 755. $25.00.

In this study Mr. Perry has presented a comprehensive survey of the development of the Canadian tax structure from its first primitive levies to the complex tax laws of today. The main emphasis, however, is on the dominant role that taxes, tariffs, and intergovernmental subsidies have played in Canadian life since Confederation.

Taxation is covered at all three levels of government—federal, provincial, and municipal. The study develops the history of all major taxes—income taxes, corporation profits taxes, sales taxes, death duties, tariffs, and property taxes. It describes the growth of provincial taxes which culminated in the chaotic tax situation of the depression, and also the experiments of municipalities with the "single tax," the personal property tax, and the income tax. It describes the financial policies of World War I, the depression, World War II, and the postwar period.

In discussing the development of tariff policy from colonial times, Mr. Perry emphasized measures which helped to shape Canada as a nation: Reciprocity, the National Policy, the British Preferential Tariff, and the Ottawa Agreements. The implications of the latest phase, the General Agreement on Tariffs and Trade, are also treated.

One of the most pressing problems in Canada is the proper allocation of taxing powers between the central government and the provinces, and the payment of subsidies by the Dominion to the provinces. The book explains the background of the arrangements made at the time of union and traces subsequent developments down to the present scheme of tax rental agreements.

The book contains numerous tables, summaries, chronological surveys, and biographical material, all of which will prove helpful to those concerned with Canadian taxation.

This important work was sponsored by the Canadian Tax Foundation.

*Financing Highway Improvements in Louisiana.* By William D. Ross, assisted by Lee J. Melton. Baton Rouge, Louisiana: Division of Research, College of Commerce, Louisiana State University, 1955. Pp. 236.

This book presents a comprehensive study of highway, road, and street finance in Louisiana. It traces the development of road administration and finance in the state, and compares the estimated costs of overcoming highway deficiencies with revenues available from existing sources and the capacity of the state to support expanded highway expenditures.

A unique aspect of the book is its attempt to apply the cost-of-service theory of taxation to the highway finance problem. Mr. Ross has estimated the average share of highway costs assignable to each type of motor vehicle registered in Louisiana, and the changes needed in existing highway-user tax rates to produce the resultant allocation of costs. The book then goes on to propose a solution to the problem of allocating highway-user revenues between state highways, parish roads, and city streets, as well as formulas for the distribution of user revenues to parishes and municipalities.

*The Minnesota Department of Taxation—An Administrative History.* By Lloyd M. Short, Clara Penniman, and Floyd O. Flom. Minneapolis: The University of Minnesota Press, 1955. Pp. 176. $3.00.

This is the second in a series of administrative histories of Minnesota state departments and agencies prepared by staff members of the Public Administration Center of the University of Minnesota. These studies have a twofold purpose: to acquaint citizens of the state with the origin, development, and operations of the agencies which administer the functions of their state government; to provide students of administration with information which will promote better understanding of current administrative institutions and practices. Changes in the patterns of organization are emphasized with a view to determine the factors responsible for change (size, scope of governmental operations, finance, personnel, and the like).

This study first describes the general organization and political framework of Minnesota tax administration and the functions performed by the central staff. That discussion is followed by a detailed description of the administration of particular parts of the tax structure: the general property tax, special property taxes, death and gift taxes, income tax, petroleum tax, cigarette tax.

At a general level, the authors conclude that Minnesota offers an excellent example of the twin developments which have characterized state administrative organization—the consolidation of related activities into a single department or agency; and the substitution of single-headed for multi-headed control in such departments.

*Housing Taxation.* By Walter A. Morton. Madison: The University of Wisconsin Press, 1955. Pp. 262. $4.75.

This study is devoted to an analysis of the extent to which property taxes have restricted the construction of an adequate volume of housing in this country.

In pursuing this question Mr. Morton was led to examine the nature of the demand for housing, and on the supply side, the place of the property tax in the general structure of housing costs. The latter investigation led in turn to a consideration of the incidence of the property tax in a dynamic context, and to a study of the burden of the property tax on persons of different incomes.

## NTA NOTES

### 1956 CONFERENCE

As previously announced, the next National Tax Conference will be sponsored by the Association in Los Angeles on November 13 to 16, with headquarters at the Hotel Biltmore.

Mr. N. Bradford Trenham of the California Taxpayers Association, well known to national tax conferees, has been selected by President Connelly as general chairman of the Local Arrangements Committee. With the enthusiasm which is characteristic of his environment, Mr. Trenham has announced his intention to make this the finest conference in NTA history.

Mr. Dixwell L. Pierce, Secretary of the California State Board of Equalization and Past President of the National Tax Association, has accepted the important post of chairman of the Program Committee. Suggestions for program content and speakers will be welcomed by Mr. Pierce and other members of this committee.

### NTA STUDY COMMITTEES

Two new study committees have been created by the Executive Committee and are being constituted as this note is written, another is hard at work, and two are " standing by " for such action as may be indicated by events of the day. The new ones are the Committee on Federal Excise Taxes, which will be headed by Professor Clarence Heer of the University of North Carolina, and the Committee on Interstate Allocation of Income, of which Walter W. Walsh, Esq., of New York is chairman. The other three are the Committee on State Equalization, the Committee on Bank Taxation, and the Committee on Intergovernmental Fiscal Relations, chaired, respectively, by Professor William G. Murray of Iowa State College, Henry F. Long, Esq., of Topsfield, Massachusetts, and Professor Alfred G. Buehler of the University of Pennsylvania.

### NOMINATING COMMITTEE

The 1956 Nominating Committee will submit nominations for president, vice president, secretary, treasurer, four regular executive committee members, and two honorary executive committee members at the annual meeting of the Association in Los Angeles on November 15. The committee must report its selections to the Secretary not later than August 17. Meanwhile, suggestions may be offered by any member of the Association to the Committee, which consists of John L. Connolly of Minnesota, Chairman; Alfred G. Buehler of Pennsylvania; C. Emory Glander of Ohio; M. Hyrum Harris of Utah; and Eugene G. Shaw of North Carolina.

RONALD B. WELCH
*Secretary*

# NATIONAL TAX ASSOCIATION

**Organized 1907—Incorporated 1930**

**OBJECT.** The National Tax Association is a non-political, non-sectarian, and non-profit-making educational organization. Its object, as stated in its certificate of incorporation, is to educate and benefit its members and others by promoting the scientific study of taxation and public finance; by encouraging research; by collecting, preserving, and diffusing scientific information; by organizing conferences; by appointing committees for the investigation of special problems; by formulating and announcing, through the deliberately expressed opinion of its conferences, the best informed thought and ripest administrative experience available; and by promoting better understanding of the common interests of national, state, and local governments in the United States and elsewhere, in matters of taxation and public finance and interstate and international comity in taxation.

**MEMBERSHIPS.** The Association welcomes to its membership, for mutual discussion and deliberation, all who may be interested in taxation and public finance generally. Annual dues are: memberships for students under 35 years of age, $5; memberships for government agencies and educational institutions and their personnel (provided they receive more than half of their income from such employment), $10; memberships for other individuals and organizations, $15; corporate memberships, $100; sustaining memberships, $100 to $1,000.

**PUBLICATIONS.** The NATIONAL TAX JOURNAL is published quarterly in March, June, September, and December. PROCEEDINGS of the annual conferences on taxation which are sponsored by the Association are published soon after the meetings. The JOURNAL and the PROCEEDINGS are sent to members without charge. To non-members the price of the JOURNAL is $5.00 per year, single numbers, $1.50. The prices of the PROCEEDINGS vary; that of the 1955 volume is $10.50.

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Applications for membership, orders for publications, and general inquiries should be addressed to Ronald B. Welch, Secretary, National Tax Association, P.O. Box 1799, Sacramento 8, California.

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